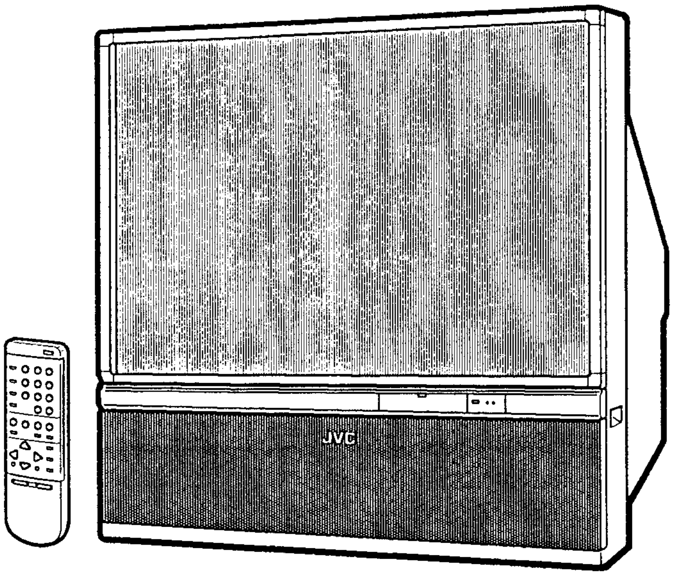
JVC

SERVICE MANUAL

REAR PROJECTION TELEVISION

BASIC CHASSIS
KB

AV-61PRO
AV-61PRO(-A)/(-HK)/(-SC)



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No.51125
July 1996

SPECIFICATIONS

Item	Content
Dimensions (W×H×D)	129.1cm × 154.3cm × 64.7cm
Weight (Mass)	86kg
TV RF system	CCIR B / G, I, D / K, K1, M
Colour system	PAL, SECAM, NTSC3.58, NTSC4.43
Sound multiplex system	NICAM (5.5MHz : B/G, 6.0MHz : I) [United Kingdom system]
	A2 (B/G) [Germany system]
Teletext system	FLOF (Fastext) [United Kingdom system]
	WST [Standard system]
Reception range	
VHF low channel (VL)	46.25MHz - 168.25MHz (AU0 - S10)
VHF high channel (VH)	175.25MHz - 463.25MHz (E5 - S41)
UHF channel (U)	471.25MHz - 863.25MHz (E21 - CHINA57)
CATV receiviable band	Mid : X - Z · S1 - S10, Super : S11 - S20, Hyper : S21 - S41
Tuning system	Frequency synthesizer system
Channel preset position	100 positions (99 + AV)
IF frequency	
Video IF frequency	38.0MHz
Sound IF frequency	33.5MHz (4.5MHz), 32.5MHz (5.5MHz), 32.0MHz (6.0MHz), 31.5MHz (6.5MHz)
Power requrirements	AC 120V - 240V, 50 / 60 Hz [Rated voltage]
	(Operating voltage : AC 90 - 260V, 50 / 60Hz)
Power consumption	Maximum 300W, Average 210W
Projection tube	17cm (6.7-inch) tubes ×3 (R / G / B)
Projection tube Hihg voltage	31.5kV ± 0.5kV (CRT cutoff : at zero beam current)
Screen	Transparent screen (unitized Fresnel lens / Double lenticular lens)
Screen size	155cm : 61-inch (measured diagonally) [124cm (W) ×93cm (H)]
Audio output	20W + 20W [Rated power output]
Speakers	16cm Round ×2 + 5cm Round ×2 (coaxial type)
Aerial input	75-ohms (VHF / UHF) unbalanced : AERIAL-type connector ×1
	(built-in MAIN / PIP spritter)
External input	**VIDEO- 1 / 2 / 3 / 4**
S-VIDEO (except VIDEO-3)	Y : 1Vp-p Positive, 75-ohms (negative sync provided)
	C : 0.286Vp-p (burst signal), 75-ohms
	Mini DIN 4 pin connector ×3
VIDEO	1Vp-p, 75-ohms (negative sync provided) , RCA pin jack ×4 [S-VIDEO input priority]
AUDIO	500mVrms (-4dBs), high impedance, RCA pin jack ×8 [L/R]
AUDIO OUT	0 to 1Vrms (+ 6dBs), low impedance (400Hz when modulated 100%)
[FRONT / REAR / CENTRE]	RCA pin jack ×5 [FRONT / REAR : L/R]
LINE OUT	
VIDEO	1Vp-p, 75-ohms (negative sync provided) , RCA pin jack ×1
AUDIO	500mVrms (-4dBs), low impedance (400Hz when modulated 100%)
	RCA pin jack ×2 [L/R]
Headphone jack	3.5mm φ stereo mini jack ×1 [PIP / MAIN selection]
Remote control unit	**RM-C995** (Dry cell battery size : UM-3 / AA / R06 ×2)

Design & specification subject to change without notice.

OPERATING INSTRUCTIONS

SPECIFICATIONS

Item \ Model	AV-61PRO	
TV RF systems	B, G, I, D, K, K1, M	
Colour systems	PAL, SECAM, NTSC 3.58 / 4.43 MHz	
Channels and frequencies	VHF low channel (VL) = 46.25 to 168.25 MHz VHF high channel (VH) = 175.25 to 463.25 MHz UHF channel (U) = 471.25 to 863.25 MHz * Mid band (X to Z, S1 to S10), Super band (S11 to S20) and Hyper band (S21 to S41) receivable	
Sound-multiplex systems	A2 / NICAM system	
Teletext systems	Fastext (United Kingdom system) / WST (standard system)	
Power requirements	AC 120 to 240 V, 50 / 60 Hz (operating AC 90 to 260 V, 50 / 60 Hz)	
Power consumption	Maximum 300 W, Average 210 W	
Screen size	155 cm (measured diagonally)	
Audio output	Rated Power output 20 W + 20 W	
Speakers	5 cm round × 2, 16 cm round × 2	
External input / output	S/VIDEO-1, S/VIDEO-2, VIDEO-4:	S/VIDEO INPUT (4 pin mini DIN) VIDEO INPUT (RCA) AUDIO L / R INPUT (RCA)
	VIDEO-3:	VIDEO INPUT (RCA) AUDIO L / R INPUT (RCA)
	LINE OUT:	VIDEO OUTPUT (RCA) AUDIO L / R OUTPUT (RCA)
	AUDIO OUT:	(Variable out (0 –1 Vrms), low impedance) CENTRE output (RCA) FRONT L / R output (RCA) SURROUND REAR L / R output (RCA)
	Headphone jack (stereo mini jack, dia. 3.5 mm)	
	Aerial socket	
Dimensions (W × H × D)	1291 mm × 1543 mm × 647 mm	
Weight	86 kg	
Accessories	Remote control unit RM-C995 × 1 AA / R6 / UM-3 dry cell battery × 2 Plug adapter × 1 (supplied for models with a 2 flat pin power plug)	

Design and specifications subject to change without notice.

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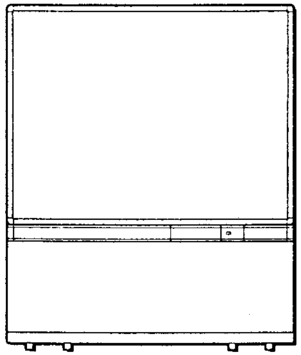
REAR PROJECTION TELEVISION

AV-61PRO



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CQ40168-001
0696-T-AB-CR-VP

Thank you for purchasing this JVC rear projection television.

To ensure your complete understanding, please read this manual thoroughly before operation.

SAFETY PRECAUTIONS

TO ENSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

WARNING:

- **TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**
- AVOID DAMAGING THE AC PLUG AND POWER CORD.
- IN THE EVENT OF A FAULT, UNPLUG THE UNIT AND CALL A SERVICE TECHNICIAN. DO NOT ATTEMPT TO REMOVE THE REAR COVER OR REPAIR THE UNIT YOURSELF.

CAUTION:

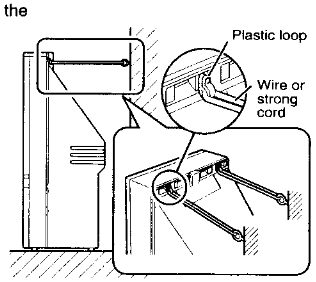
- Operate using only the power source specified on the unit (AC 120 – 240 V, 50 / 60 Hz (operating AC 90 – 260 V, 50 / 60 Hz)).
- Avoid improper installation and never position the unit where it cannot obtain good ventilation.
- Do not allow objects or liquid into the openings in the cabinet.
- If you are planning to not use the TV for a long period of time, be sure to disconnect the power plug from the AC outlet.
- Never place anything on top of the TV.
- This TV set is mounted on casters which make it easier to move. However, when positioning or moving the TV, observe the following cautions:
  - — Do not position the TV on a slanting or unstable place.
  - — Do not use excessive force, which could damage the TV, or even overturn the TV, breaking it and possibly injuring someone.
  - — To avoid overturning the TV, which could injure someone, secure it in place using the method described below.
  - — Before moving the TV, unplug the plug from the AC socket, and be sure to disconnect ALL of the cables connecting the TV to external devices.
  - — There must be at least 8 mm between the bottom of the TV and the floor. When moving the TV, make sure that the bottom of the TV does not scrape along the floor. In addition, be careful when moving the TV across thick carpets, bumps in the floor, or other changes in floor level (such as at the edges of carpets). Be especially careful that the TV or the caster wheels do not catch on anything. If the TV falls over, the TV will break and could injure someone.

To prevent the TV from falling over:

Use the two small plastic loops on the back of the TV set, and connect them to a wall or column using two secure wires or strong cords.

Notes:

- The wire or strong cord, and wall ring (or similar attachment), are not supplied with this TV set. Use commonly available items, but make sure that they are strong.
- The thread or wire should be straight.
- Make sure that the wire or strong cords is taut and securely attached to a wall ring (or similar attachment).



CAUTIONS ON SCREEN TREATMENT

Screen Burn

Screen burn will only happen if you misuse the TV, and therefore damage from screen burn is not covered by the warranty. Screen burn happens when images remain on the screen without moving for an extended period of time. Screen burn can occur in any projection television made by any manufacturer. You may have seen screen burn on ATM bank machines. People who use "screen savers" on their computer monitors are saving their monitors from screen burn. Especially for projection TVs, screen burn is caused by programmes or images displayed when the TV has a high CONTRAST or BRIGHTNESS setting.

- Do not play video games, computer programmes, or similar programmes that have fixed or repetitive images.
- Keep contrast and brightness low — especially on teletext programmes, news programmes, business reports, and home-shopping (or similar) programmes. To adjust contrast and brightness, see page 18.
- Do not leave fixed images on the screen for a long time.

Screen Cleaning

Your projection television screen is fragile and should be handled with extreme care, especially if you are forced to touch the screen directly — i.e. when cleaning it. Be careful not to scratch the screen with jewellery or fingernails.

The following products will DAMAGE THE SCREEN. Do not use them under any circumstances.

- **AMMONIA.** NEVER use detergents that contain ammonia!
- **AEROSOLS AND CHEMICALS.** NEVER use aerosol or chemical cleaners!
- **GLASS AND WINDOW CLEANERS.** NEVER use glass or window cleaners!

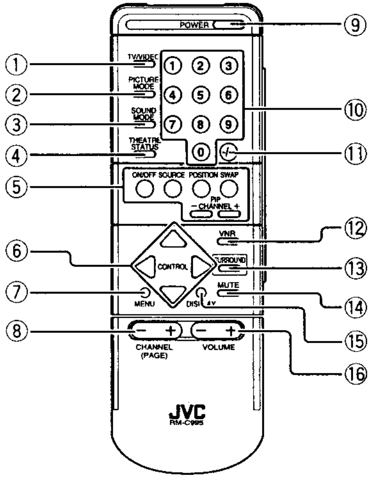
To clean the screen:

Clean the screen *only* with a solution consisting of water and mild dish detergent.

1. Add two to three drops of detergent to one quart of water.
2. Take a soft cloth (such as a cotton tee-shirt), dampen the cloth with the soapy solution, and *gently* wipe the screen from top to bottom.
3. Gently wipe off any soap left on the screen.

Locations of remote control buttons

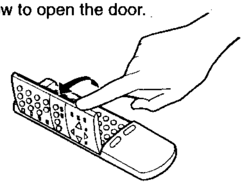
OUTSIDE BUTTONS

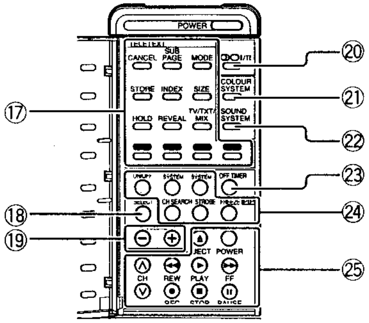

POWER
TV/VIDEO
PICTURE MODE
SOUND MODE
THEATRE STATUS
ON/OFF SOURCE POSITION SWAP
PIP
–CHANNEL+
VNR
CONTROL
SURROUND
MUTE
MENU
DISPLAY
CHANNEL (PAGE)
VOLUME
JVC
RM-C995
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯

①	TV/VIDEO button	p.16
②	PICTURE MODE button	p.17
③	SOUND MODE button	p.17
④	THEATRE STATUS button	p.18
⑤	PIP (Picture-In-Picture) buttons	p.20
⑥	CONTROL buttons	p.13,18,22,27
⑦	MENU button	p.9,10,12,13,18,19
⑧	CHANNEL (PAGE) –/+ button	p.14,24
⑨	POWER button	p.8,14
⑩	Number buttons	p.8,14
⑪	-/-- button	p.14
⑫	VNR button	p.18
⑬	SURROUND button	p.22,28
⑭	MUTE button	p.17
⑮	DISPLAY button	p.19
⑯	VOLUME –/+ button	p.15,27

INSIDE BUTTONS

How to open the door.

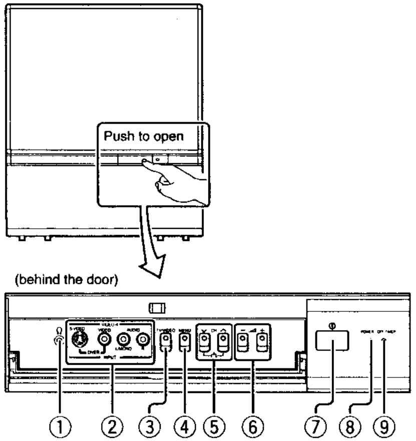



POWER
TELETEXT
CANCEL
SUB PAGE
MODE
STORE
INDEX
SIZE
HOLD
REVEAL
TV/TXT/MIX
COLOUR SYSTEM
SOUND SYSTEM
OFF TIMER
CH SEARCH
STROBE
CH
REW
PLAY
FF
EJECT
POWER
⑰
⑱
⑲
⑳
㉑
㉒
㉓
㉔
㉕

⑰	TELETEXT buttons	p.24
⑱	HEADPHONE SELECT button	p.15,20
⑲	HEADPHONE VOLUME –/+ buttons	p.15,20
⑳	ꝏI/II (multi-sound) button	p.17
㉑	COLOUR SYSTEM button	p.17
㉒	SOUND SYSTEM button	p.17
㉓	OFF TIMER button	p.19
㉔	PIP (Picture-In-Picture) buttons	p.20
㉕	VCR buttons	p.16

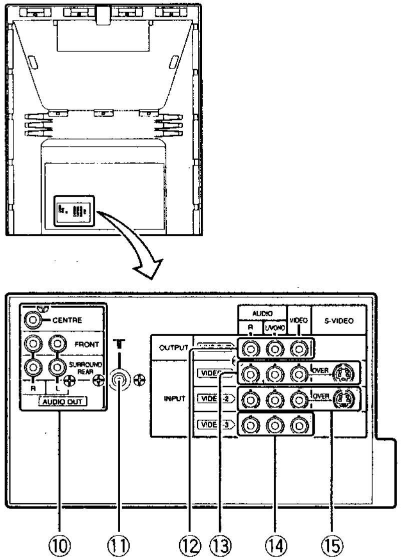
Locations of TV buttons and parts

FRONT PANEL


Push to open
(behind the door)
①
②
③
④
⑤
⑥
⑦
⑧
⑨

①	Headphone jack (mini jack)	p.6,15,20,23
②	VIDEO-4 jacks	p.6,16
③	TV/VIDEO button	p.16
④	MENU button	p.9,10,12,13,18,19
⑤	Channel ∨/∧ buttons	p.14,24
⑥	Volume –/+ buttons	p.15,27
⑦	Main Power button	p.8,14
⑧	POWER lamp	p.8,14
⑨	OFF TIMER lamp	p.19

REAR PANEL

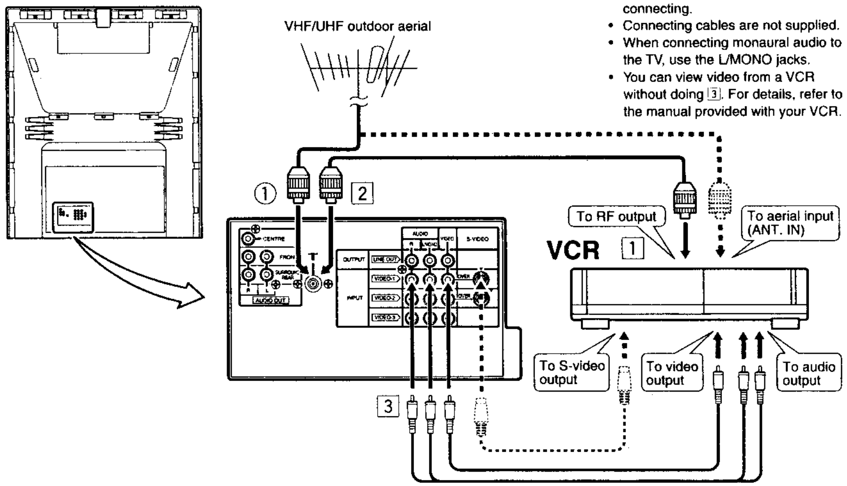

CENTRE
FRONT
SURROUND REAR
AUDIO OUT
AUDIO
VIDEO
S-VIDEO
OUTPUT
INPUT
⑩
⑪
⑫
⑬
⑭
⑮

⑩	AUDIO OUT jacks	p.26
⑪	Aerial socket	p.6
⑫	LINE OUT (AV output) jacks	p.6,7
⑬	VIDEO-1 jacks	p.6,16
⑭	VIDEO-3 jacks	p.6,7,16
⑮	VIDEO-2 jacks	p.6,7,16

PREPARATION

1. Connecting the aerial and VCR

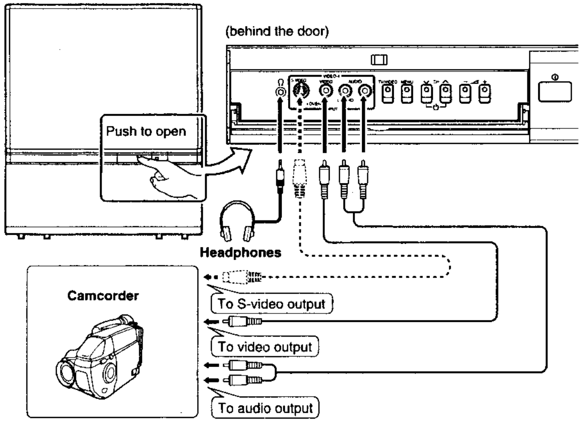
If not connecting a VCR, do ① only.
If connecting a VCR, proceed 1 → 2 → 3.


VHF/UHF outdoor aerial
①
2
To RF output
To aerial input (ANT. IN)
VCR 1
To S-video output
To video output
To audio output
3

Notes:
- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- When connecting monaural audio to the TV, use the L/MONO jacks.
- You can view video from a VCR without doing 3. For details, refer to the manual provided with your VCR.

2. Connecting other external devices

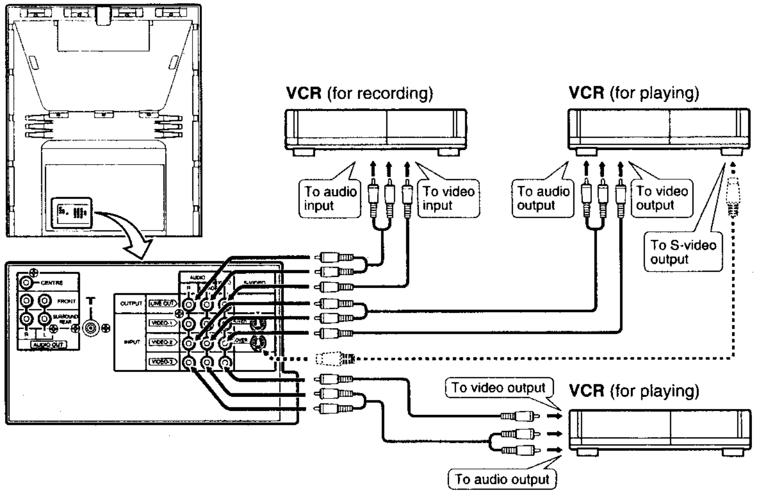
If connecting to the jacks on the front panel


(behind the door)
Push to open
Headphones
Camcorder
To S-video output
To video output
To audio output

CAUTION:
- Do not play video games, computer programmes, or similar programmes that have fixed or repetitive images. Doing so could cause screen burn.

Notes:
- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- When connecting monaural audio to the TV, use the L/MONO jacks.
- For details on how to connect the AUDIO OUT jack on your TV and external devices such as the audio amplifiers or speakers. see page 26.
- The same audio and video that you are watching on your TV is output from LINE OUT jacks.

If connecting to the jacks on the rear panel


VCR (for recording)
VCR (for playing)
To audio input
To video input
To audio output
To video output
To S-video output
To video output
VCR (for playing)
To audio output

3. Connecting the power cord

Insert the power plug into an AC outlet (AC 120–240 V, 50 / 60 Hz (operating at AC 90 – 260 V, 50 / 60 Hz)).

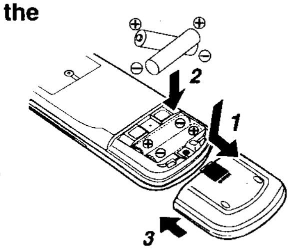
4. Inserting batteries into your remote control

Condition:
- Use two AA/R6/UM-3 dry cell batteries.

1. Press in and slide off the cover.

2. Insert two batteries, as shown.

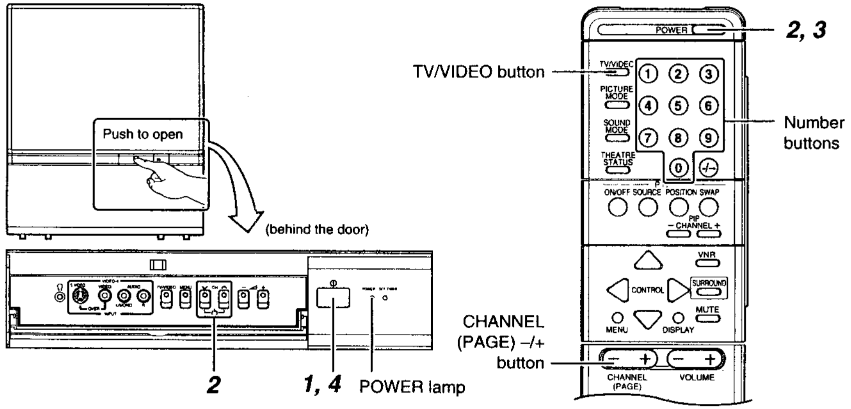
3. Replace the cover.



CAUTION:
- Follow the cautions printed on the batteries.
- Correctly insert two batteries, observing the ⊕ and ⊖ polarities, inserting the ⊖ end first.

Notes:
- Battery life is approx. six months to one year, depending on frequency of use.
- If the remote control operates erratically, replace the batteries.
- We recommend that you use the supplied batteries initially and replace them as soon as operation becomes erratic. The supplied batteries are for testing, not for regular use.

5. Turning the power on and off


Push to open
(behind the door)
TV/VIDEO button
2, 3
Number buttons
CHANNEL (PAGE) –/+ button
2
1, 4
POWER lamp

How to turn the power on

1. Press the Main Power button to turn the main power on.

The POWER lamp lights red.

- The TV enters Standby mode.

Note:
- If you turn off the main power in TV mode and then turn it on again, the TV is automatically set to TV mode.

2. Press POWER or the Channel ∨/∧ buttons.

The POWER lamp changes from red to green.

Note:
- You can use CHANNEL (PAGE) –/+, a number button, or TV/VIDEO, to turn the power on.

How to turn the power off

3. Press POWER.

The POWER lamp changes from green to red.

- The TV enters Standby mode.

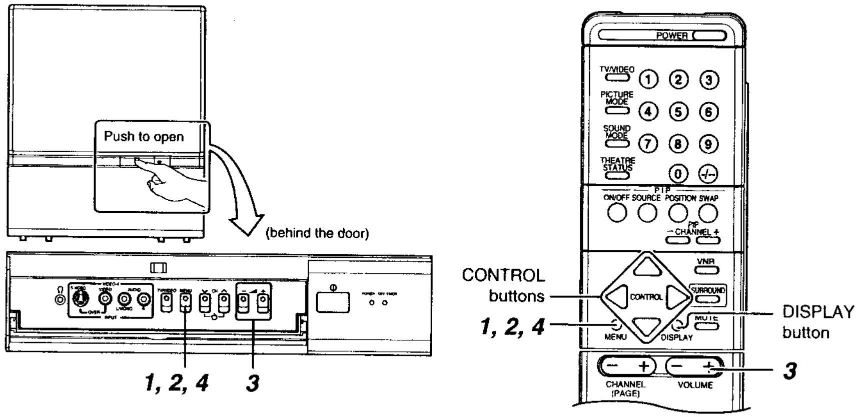
4. Press the Main Power button to turn the main power off.

The POWER lamp goes out.

Note:
- To save energy, we recommend that you turn the main power off if you do not plan to use your TV for a long time.

6. Selecting the on-screen language

You can select the on-screen language (Chinese or English). In this manual, on-screen descriptions are given in English. Select English.


Push to open
(behind the door)
1, 2, 4
3
CONTROL buttons
1, 2, 4
DISPLAY button
3

1. Press MENU.

The MENU display appears.

Note:
- If the menu display appears in English, the TV's on-screen language is already set to English, so you can skip steps 2 and 3.

2. Press MENU twice.

3. Press VOLUME –/+ or the Volume –/+ buttons to select ENGLISH.

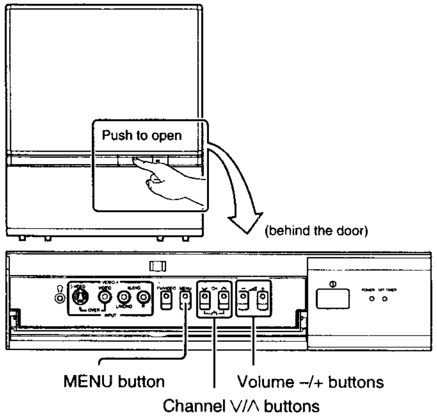
Note:
- You can use the CONTROL buttons instead of MENU and VOLUME –/+.
  - ▼▲ : selects a menu item
  - ◀▶ : changes the setting of the selected menu item

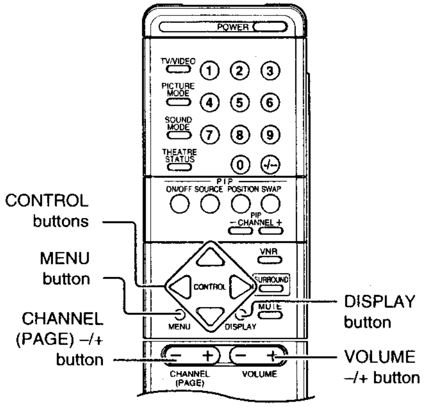
- ● This completes the procedure.
  Press MENU repeatedly to exit the menu.

Note:
- You can exit from the MENU display by pressing DISPLAY.

7. Allocating stations to channels

To view a TV programme, you must first allocate stations to channels. Up to 100 stations can be preset to channels on this TV. There are two ways to allocate a station to a channel. Choose whichever method you like to allocate stations to channels.

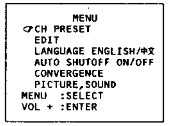

Push to open
(behind the door)
MENU button
Volume –/+ buttons
Channel V/Λ buttons


CONTROL buttons
MENU button
CHANNEL (PAGE) –/+ button
DISPLAY button
VOLUME –/+ button
POWER
TV/VIDEO
PICTURE MODE
SOUND MODE
THEATRE STATUS
PIP
ON/OFF
SOURCE
POSITION
SWAP
CHANNEL
VNR
CONTROL
SURROUND
MUTE
MENU
DISPLAY
CHANNEL (PAGE)
VOLUME

To allocate all receivable stations to channels — AUTO CH PRESET

1. Press MENU.

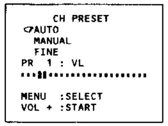
The MENU display appears.



```
        MENU
☞CH PRESET
  EDIT
  LANGUAGE ENGLISH/中文
  AUTO SHUTOFF ON/OFF
  CONVERGENCE
  PICTURE,SOUND
MENU  :SELECT
VOL + :ENTER
```

2. Press VOLUME + or the Volume + button.

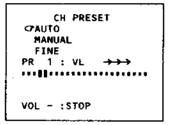
The CH PRESET menu appears.



```
     CH PRESET
☞AUTO
  MANUAL
  FINE
PR  1 : VL
•••▌••••••••••••••••••

MENU  :SELECT
VOL + :START
```

3. Press VOLUME + or the Volume + button.

"→→→" is displayed on the screen, and automatic allocation begins. All stations that can be received on your TV are automatically allocated to TV channels.



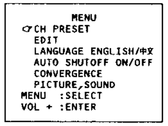
```
     CH PRESET
☞AUTO
  MANUAL
  FINE
PR  1 : VL     →→→
•••▌••••••••••••••••••

VOL - :STOP
```

- ● The procedure is complete when all receivable stations are allocated to channels. The menu display disappears.

To allocate a station to a specific channel — MANUAL CH PRESET

1. Press MENU.

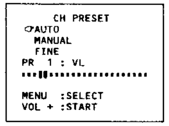
The MENU display appears.



```
        MENU
☞CH PRESET
  EDIT
  LANGUAGE ENGLISH/中文
  AUTO SHUTOFF ON/OFF
  CONVERGENCE
  PICTURE,SOUND
MENU  :SELECT
VOL + :ENTER
```

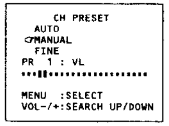
2. Press VOLUME + or the Volume + button.

The CH PRESET menu appears.



```
     CH PRESET
☞AUTO
  MANUAL
  FINE
PR  1 : VL
•••▌••••••••••••••••••

MENU  :SELECT
VOL + :START
```

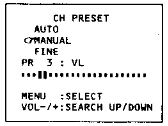
3. Press MENU to select MANUAL.



```
     CH PRESET
  AUTO
☞MANUAL
  FINE
PR  1 : VL
•••▌••••••••••••••••••

MENU  :SELECT
VOL-/+:SEARCH UP/DOWN
```

Note:
- You can also use CONTROL ▼/▲ to select a menu item.

4. Press CHANNEL (PAGE) –/+ or the Channel V/Λ buttons to select a channel number.



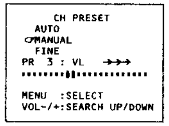
```
     CH PRESET
  AUTO
☞MANUAL
  FINE
PR  3 : VL
•••▌••••••••••••••••••

MENU  :SELECT
VOL-/+:SEARCH UP/DOWN
```

Note:
- The channel number is displayed on screen as a PR number ("PR number" means preset channel number).

Example:
Channel 1 is displayed as "PR 1."

5. Press VOLUME –/+ or the Volume –/+ buttons to search for a station.

When the TV finds a station, the indication flashes once. Press VOLUME –/+ or the Volume –/+ buttons if you want a different station.



```
     CH PRESET
  AUTO
☞MANUAL
  FINE
PR  3 : VL     →→→
••••••••▌•••••••••••••

MENU  :SELECT
VOL-/+:SEARCH UP/DOWN
```

- Repeat steps 4 and 5 to allocate all desired stations to channels.

If reception is poor:
1. Press MENU to select FINE.
2. Select the channel by pressing CHANNEL (PAGE) –/+ or the Channel V/Λ buttons.
3. Press VOLUME –/+ or the Volume –/+ buttons to fine-tune the station.

Notes:
- If the picture is not clear or no colour appears, change the colour system manually (see page 17 for details).
- If the sound is not clear or is inaudible, change the sound system manually (see page 17 for details).
- Channel number "0" appears on the screen as "AV". We recommend that you allocate this channel to a VCR connected to the aerial socket.
- You can also exit the menu by pressing DISPLAY twice.

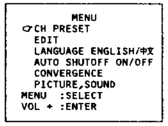
- ● This completes the procedure.
  Press MENU repeatedly to exit the menu.

To edit channels

Use the EDIT screen to delete (un-allocate) a station already allocated to a channel, or to skip a specific channel.

1. Press MENU.

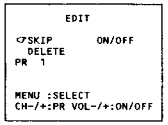
The MENU display appears.



```
        MENU
 ☞CH PRESET
   EDIT
   LANGUAGE ENGLISH/中文
   AUTO SHUTOFF ON/OFF
   CONVERGENCE
   PICTURE,SOUND
 MENU  :SELECT
 VOL + :ENTER
```

2. Press MENU to select EDIT, and press VOLUME + or the Volume + button.

The EDIT menu appears.

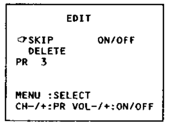


```
        EDIT

☞SKIP        ON/OFF
  DELETE
PR  1


MENU :SELECT
CH-/+:PR VOL-/+:ON/OFF
```

Note:

- You can also use CONTROL ▼/▲ to select an item.

3. Press CHANNEL (PAGE) –/+ or the Channel V/Λ buttons to select the channel.



```
        EDIT

☞SKIP        ON/OFF
  DELETE
PR  3


MENU :SELECT
CH-/+:PR VOL-/+:ON/OFF
```

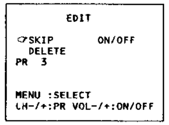
Note:

- The channel number is displayed on screen as a PR number ("PR number" means preset channel number).
  Example:
  Channel 1 is displayed as "PR 1."

4. Select SKIP or DELETE.

To skip a channel

1. Press VOLUME –/+ or the Volume –/+ buttons to turn SKIP ON or OFF.



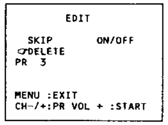
```
        EDIT

☞SKIP        ON/OFF
  DELETE
PR  3


MENU :SELECT
CH-/+:PR VOL-/+:ON/OFF
```

When SKIP is ON:

When you turn on skip for a channel, that channel cannot be selected by pressing CHANNEL (PAGE) –/+ or the Channel V/Λ buttons. However, it can be selected directly, using the number buttons.

To delete a channel

1. Press MENU to select DELETE.
2. Press VOLUME + or the Volume + button.
   The station allocated to that channel is deleted.



```
        EDIT

 SKIP        ON/OFF
☞DELETE
PR  3


MENU :EXIT
CH-/+:PR VOL + :START
```

Notes:

- When you delete a station allocated to a channel, the channel number of every station after it moves forward by one.
- You can also exit the menu by pressing DISPLAY twice.

- Repeat steps 3 and 4 to edit all desired channels.

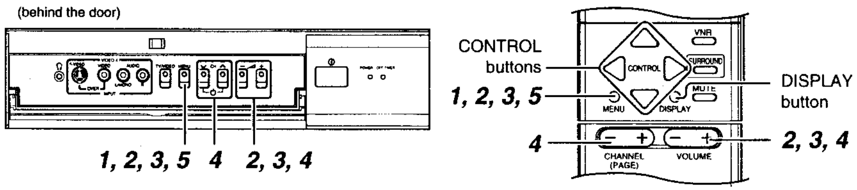
● This completes the procedure.
Press MENU repeatedly to exit the menu.

8. Adjusting CRT colour CONVERGENCE

Your CRT projects in three colours: red, green, and blue. If reds and blues become separated from the green (which is fixed), perform the adjustment described below so that all three beams meet at a single point of convergence.

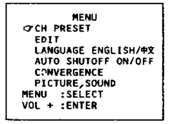
Note:

- Colours may become separated after the TV has been moved, or over a long period of time if regularly subjected to low level vibrations. If the colours become separated, please perform the adjustment below again.



1. Press MENU.

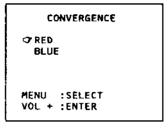
The MENU display appears.



```
        MENU
 ☞CH PRESET
   EDIT
   LANGUAGE ENGLISH/中文
   AUTO SHUTOFF ON/OFF
   CONVERGENCE
   PICTURE,SOUND
 MENU  :SELECT
 VOL + :ENTER
```

2. Press MENU repeatedly to select CONVERGENCE and press VOLUME + or the Volume + button.

The CONVERGENCE menu appears.



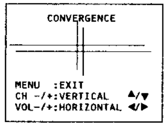
```
     CONVERGENCE

 ☞RED
   BLUE



 MENU  :SELECT
 VOL + :ENTER
```

Note:

- You can also use CONTROL ▼/▲ to select an item.

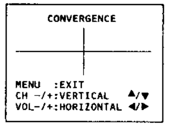
3. Press MENU to select a colour to adjust and press VOLUME + or the Volume + button.

The CONVERGENCE adjusting menu appears.



```
     CONVERGENCE



MENU  :EXIT
CH -/+:VERTICAL    ▲/▼
VOL-/+:HORIZONTAL ◀/▶
```

4. Move the cross until the two crosses are at exactly the same point on the screen, as shown in the example on the right.



```
     CONVERGENCE



MENU  :EXIT
CH -/+:VERTICAL    ▲/▼
VOL-/+:HORIZONTAL ◀/▶
```

To move the cross left or right

Press any of the following buttons:

- VOLUME –/+, the Volume –/+ buttons or CONTROL ◀/▶.

To move the cross down or up

Press any of the following buttons:

- CHANNEL (PAGE) –/+, the Channel V/Λ buttons or CONTROL ▼/▲.

Note:

- If you see only one cross, the convergence is already correctly adjusted, and you do not need to perform step 4.

5. Press MENU.

The CONVERGENCE menu returns.

- Return to step 3 and select the other colour. Then repeat step 4.

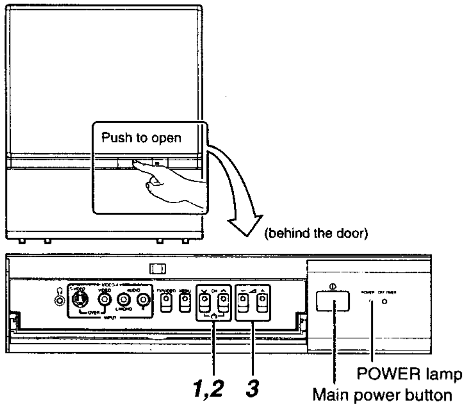
● This completes the procedure.
Press MENU repeatedly to exit the menu.

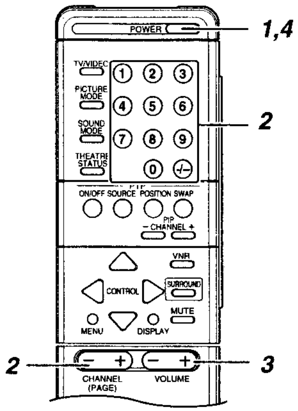
Note:

- You can also exit the menu by repeatedly pressing DISPLAY.

BASIC OPERATION

Viewing a television programme





1. Press POWER or the Channel ∨/∧ buttons.

The POWER lamp changes from red to green.

Notes:
- If your TV does not turn on, press the Main power button on the TV and do the operation again.
- You can also press CHANNEL (PAGE) –/+, a number button or TV/VIDEO to turn the power on.

2. Select a channel.

Browse selection
- Only channels which have stations can be selected.
  Press CHANNEL (PAGE) –/+ or the Channel ∨/∧ buttons.

Direct channel selection
- Enter the channel number.

To select a one-digit channel number:
1. Press -/-- to display the "-" mark.
2. Press the corresponding number button.
   Example: To select channel 6, press "6".

To select a two-digit channel number:
1. Press -/-- to display the "--" mark.
2. Press the corresponding number buttons.
   Example: To select channel 12, press -/-- to display the "--" mark, then press "1" and "2".

Notes:
- To use external equipment such as VCRs, see "Viewing images from external devices" on page 16.
- If the picture is not clear or no colour appears, change the colour system manually (see page 17 for details).
- If the sound is not clear or is inaudible, change the sound system manually (see page 17 for details).
- To avoid screen burn, do not leave fixed images on the screen for a long time.

3. Press VOLUME –/+ or the Volume –/+ buttons.

The level indicator appears and the volume changes.

4. Press POWER to turn the TV off.

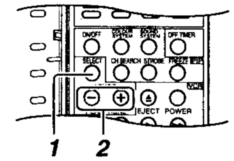
The POWER lamp changes from green to red.
- The TV enters Standby mode.

To use the front panel:
Press the Main Power button to turn the main power off.
The POWER lamp goes out.

Note:
- To save energy, we recommend that you turn the main power off if you do not plan to use your TV for a long time.

To listen to the sound using headphones

(Inside buttons)

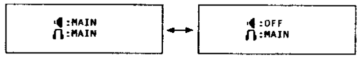


Note:
- The use headphones while viewing a PIP picture, see "To listen to the sound of the PIP picture" on page 20.

Condition:
- Connect headphones to the TV's headphone jack.

1. Press HEADPHONE SELECT repeatedly to select a headphone mode.

The sound from the headphones and speakers changes as shown below.



◀ :MAIN/∩ :MAIN mode:
Sound from speakers and headphones.

◀ :OFF/∩ :MAIN mode:
Sound from headphones only.

Note:
- In TV mode, if you select ◀:MAIN / ∩:MAIN mode, sound from the headphones becomes monaural.

2. Press HEADPHONE VOLUME –/+ to adjust the volume of the headphones.

The level indicator appears, showing the volume of the headphones.

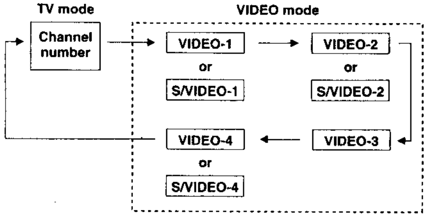
Note:
- If using ◀:OFF /∩:MAIN mode you can use both VOLUME –/+ or the volume –/+ buttons to adjust the volume of the headphones.

Viewing images from external devices

To view images from an external device (such as a VCR) that is connected to the TV, select the input jack that you used to connect it to the TV.

1. Press TV/VIDEO repeatedly to select an input jack.

- The current selection appears, and disappears automatically after several seconds.



TV mode:
Shows images from an external device (such as a VCR) or TV aerial connected to the aerial socket of your TV.

VIDEO mode:
Shows images from an external device (such as a VCR) connected to the displayed input jack.
- If "S/VIDEO-1", "S/VIDEO-2", or "S/VIDEO-4" is displayed, you are using the device connected to the corresponding S-VIDEO jack.

CAUTION:
- Do not play video games, computer programmes, or similar programmes that have fixed or repetitive images. Doing so could cause screen burn.

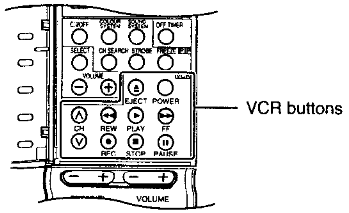
Notes:
- If the picture is not clear or no colour appears, change the colour system manually (see page 17).
- To avoid screen burn, do not leave fixed images on the screen for a long time.

Note:
- If you connect an external device to the S-VIDEO input jack while already using the VIDEO input jack, the image from S-VIDEO overrides the VIDEO image.

Controlling your JVC VCR with the remote control

Each VCR button on the remote control corresponds to a button on a JVC VCR.

(Inside buttons)



Notes:
- For details, refer to the manual of your JVC VCR.
- Depending on your VCR, the remote control may not operate perfectly, and may not even control the VCR at all.

SOUND AND PICTURE

SOUND SYSTEM

The sound system is automatically selected, but if sound is not clear or is inaudible, select the sound system manually.

Note:
- You cannot select the sound system manually when in VIDEO mode.

1. Press SOUND SYSTEM repeatedly.

SYSTEM B/G

→ B/G → I → D/K → M

COLOUR SYSTEM

The colour system is automatically selected, but if the picture is not clear or no colour appears, select the colour system manually.

1. Press COLOUR SYSTEM repeatedly.

PAL

When the TV is in TV mode (channels 1 to 99):

→ PAL → SECAM → NTSC3.58 → NTSC4.43

When the TV is in VIDEO mode or channel 0 (AV mode):

→ AUTO → PAL → SECAM → NTSC3.58 → NTSC4.43

AUTO:
Automatic colour system selection.

Note:
- AUTO may not function properly depending on signal quality. If the picture is abnormal in AUTO mode, select another colour system manually.

MULTI SOUND

You can select the multi sound mode for stereo broadcast programmes and bilingual programmes.

Condition:
- To listen to stereo broadcast or bilingual programmes using headphones, press HEADPHONE SELECT to change the headphone mode to ◀:OFF/∩:MAIN mode.

Note:
- MULTI SOUND function has no effect on programmes other than A2 or NICAM broadcast programmes.

1. Press ꝏ/I/II (multi sound) to select the multi sound mode.

1
NICAM ꝏ

ꝏ : Stereo sound
I : Bilingual I (Sub I)
II : Bilingual II (Sub II)
○ : Monaural sound

Note:
- The multi sound system (NICAM or A2 system) is displayed as "NICAM" or "A2".

MUTE

You can mute the volume to 0 instantly. This is convenient when answering the phone or when receiving visitors.

1. Press MUTE.

The sound from the speakers is muted.

.... 0

If the headphone mode is ◀:OFF/∩:MAIN mode:
The sound of the headphones is muted.

∩ 0

To restore the sound:
Press MUTE again.

Notes:
- You can also restore the sound by pressing VOLUME –/+ or the Volume –/+ buttons.
- You can also restore the sound from the headphones by pressing HEADPHONE VOLUME –/+.

SOUND MODE

You can choose from among three sound modes.

Condition:
- To adjust the sound of the headphones, press HEADPHONE SELECT to select ◀:OFF/∩:MAIN mode.

1. Press SOUND MODE repeatedly.

DYNAMIC

→ DYNAMIC → STANDARD → LIGHT

DYNAMIC:
Heightens bass and treble.

STANDARD:
Standard sound adjustment.

LIGHT:
Softens bass and treble.

PICTURE MODE

You can choose from among three picture modes.

1. Press PICTURE MODE repeatedly.

BRIGHT

→ BRIGHT → STANDARD → SOFT

BRIGHT:
Hightens contrast and sharpness.

STANDARD:
Standard picture adjustment.

SOFT:
Softens contrast and sharpness.

THEATRE STATUS

When you watch a film, use THEATRE STATUS to get better picture.

1. Press THEATRE STATUS repeatedly.

THEATRE STATUS

↕

THEATRE STATUS OFF

THEATRE STATUS:
When viewing a film programme.

THEATRE STATUS OFF:
When viewing a normal programme.

VNR

You can reduce picture noise by using VNR (Video Noise Reduction).

1. Press VNR repeatedly.

VNR ON

↕

VNR OFF

VNR ON:
When viewing a noisy picture.

VNR OFF:
When viewing a normal picture.

PICTURE/SOUND ADJUSTMENT

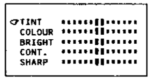
You can adjust the picture and sound as you like.

CAUTION:
- Be careful! If you increase BRIGHTNESS or CONTRAST too high, you could cause screen burn.

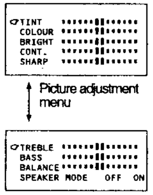
Condition:
- To use sound adjustment to adjust the sound of the headphones, press HEADPHONE SELECT to select ◀:OFF/∩:MAIN mode.

1. Press any CONTROL button.

The picture/sound adjustment menu appears.



2. Press CONTROL ▼/▲ to select an item, then press CONTROL ◀/▶ to adjust it.



◀	Items	▶
Reddish	TINT (picture tint)	Greenish
Lighter	COLOUR (picture colour)	Deeper
Darker	BRIGHT (picture brightness)	Brighter
Lower	CONT. (picture contrast)	Higher
Softer	SHARP (picture sharpness)	Sharper
Weaker	TREBLE (high frequency sound)	Stronger
Weaker	BASS (low frequency sound)	Stronger
Left	BALANCE (audio balance)	Right

SPEAKER MODE OFF/ON:
Use this function if you connect an audio amplifier and front speakers to your TV. If you set this function to OFF, sound is no longer output from the TV's speakers. For details, see "To use 2 external speakers" on page 27.

Notes:
- When enjoying Dolby* Pro Logic Surround sound with 4 or 5 speakers, the Sound adjustment menu does not appear.
- You can adjust the TINT (picture tint) only when the colour system is NTSC 3.58 or NTSC 4.43.
- You cannot adjust COLOUR (picture colour) when the picture is black-and-white.

* Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby", the double-D symbol and "Pro Logic" are trademarks of Dolby Laboratories Licensing Corporation.

To use MENU and VOLUME –/+ (or the Volume –/+ buttons) to adjust picture and sound

Note:
- You cannot use this method when viewing a teletext programme.

1. Press MENU.

The MENU display appears.

2. Press MENU repeatedly to select "PICTURE, SOUND" and press VOLUME + or the Volume + button.

The picture/sound adjustment menu appears.

Note:
- When enjoying Dolby Pro Logic Surround sound with 4 or 5 speakers, the menu display will automatically replace "PICTURE, SOUND" with "PICTURE."

3. Press MENU repeatedly to select an item, then press VOLUME –/+ or the Volume –/+ buttons to adjust it.

● This completes the procedure. Press MENU repeatedly to exit the menu.

OTHER FEATURES

DISPLAY

You can check the current channel number and multi sound mode.

1. Press DISPLAY.

The current channel number and multi sound mode are displayed for several seconds.

1
NICAM ꝏ

OFF TIMER

You can set the TV to automatically turn off at a specified period of time.

Note:
- The OFF TIMER does not turn off the Main power.

1. Press OFF TIMER repeatedly.

The period of time increases in 10-minute intervals.

OFF TIMER 10

→ 0 → 10 → 20 ••• 100 → 110 → 120 ┐

- The OFF TIMER lamp lights when the OFF TIMER is set.

To display the remaining OFF TIMER time:
Press OFF TIMER once.

To cancel the OFF TIMER:
Press OFF TIMER repeatedly to display "OFF TIMER 0".
The OFF TIMER lamp goes off.

Note:
- One minute before the OFF TIMER turns off the TV, "GOOD NIGHT!" appears. Three seconds before the OFF TIMER turns off the TV, "JVC" is displayed, blinking, on the screen.

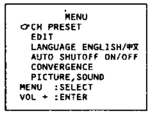
AUTO SHUTOFF

You can set the TV to automatically turn off after no signal is received for ten consecutive minutes.

Notes:
- AUTO SHUTOFF works in TV mode only.
- AUTO SHUTOFF does not turn off the Main power.
- AUTO SHUTOFF also turns off the TV after extremely weak broadcast signals are received for ten consecutive minutes. If this happens, turn off AUTO SHUTOFF.

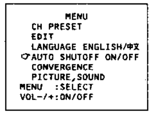
1. Press MENU.

The MENU display appears.



```
        MENU
 ☞CH PRESET
  EDIT
  LANGUAGE ENGLISH/中文
  AUTO SHUTOFF ON/OFF
  CONVERGENCE
  PICTURE,SOUND
 MENU  :SELECT
 VOL + :ENTER
```

2. Press MENU repeatedly to select AUTO SHUTOFF.



```
        MENU
  CH PRESET
  EDIT
  LANGUAGE ENGLISH/中文
 ☞AUTO SHUTOFF ON/OFF
  CONVERGENCE
  PICTURE,SOUND
 MENU  :SELECT
 VOL-/+:ON/OFF
```

Note:
- You can also use CONTROL ▼/▲ to select AUTO SHUTOFF.

3. Press VOLUME –/+ or the Volume –/+ buttons to turn AUTO SHUTOFF ON or OFF.

ON:
To turn on AUTO SHUTOFF function.

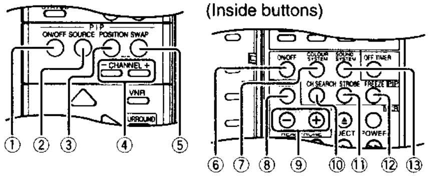
OFF:
To turn off AUTO SHUTOFF function.

Note:
- You can use also CONTROL ◀/▶ to select ON or OFF.

● This completes the procedure. Press MENU repeatedly to exit the menu.

Note:
- You can also exit the menu by pressing DISPLAY.

PIP (picture in picture)



① PIP ON/OFF button
② PIP SOURCE button
③ PIP POSITION button
④ PIP CHANNEL –/+ buttons
⑤ PIP SWAP button
⑥ PIP ON/OFF button
⑦ PIP COLOUR SYSTEM button
⑧ HEADPHONE SELECT button
⑨ HEADPHONE VOLUME –/+ buttons
⑩ PIP CH SEARCH button
⑪ PIP STROBE button
⑫ PIP FREEZE button
⑬ PIP SOUND SYSTEM button

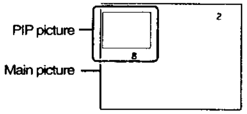
BASIC PIP OPERATION

You can display a small picture (PIP) within the regular picture (main picture). For example, you can watch two TV programmes at the same time.

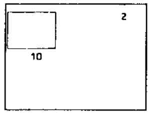
To view a TV programme in the PIP picture

1. Press PIP ON/OFF.

The PIP picture appears.



2. Press PIP CHANNEL –/+ to select a channel.



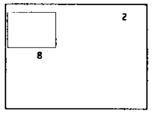
To clear the PIP picture:
Press PIP ON/OFF again.

Notes:
- If the PIP picture is not clear or no colour appears, change the colour system manually (see next page for details).
- If the TV receives no broadcast in the main picture channel, the screen turns blue and the PIP picture is not displayed. Select a main picture channel that has a broadcast signal.
- The teletext cannot be displayed in the PIP picture.

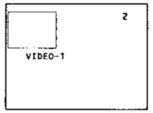
To view from an external device in the PIP picture

1. Press PIP ON/OFF.

The PIP picture appears.



2. Press PIP SOURCE repeatedly to select the source of the PIP picture.



To clear the PIP picture:
Press PIP ON/OFF again.

Note:
- If the PIP picture is not clear or no colour appears, change the colour system manually (see next page for details).

To listen to the sound of the PIP picture

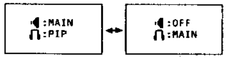
While listening to the sound of the main picture on the TV's speakers, you can listen to the sound of the PIP picture on headphones.

Condition:
- Connect headphones to the TV's headphone jack.

Notes:
- If the source of the PIP picture is TV, the sound of the PIP picture is monaural only.
- You cannot use the headphone surround function when listening to the sound of the PIP picture.

1. Press HEADPHONE SELECT repeatedly to select a headphone mode.

The sound from the headphones and speakers changes as shown below.



◀ :MAIN/∩ :PIP mode:
Main picture sound from speakers.
PIP picture sound from headphones.

◀ :OFF/∩ :MAIN mode:
No sound from speakers.
Main picture sound from headphones.

2. Press HEADPHONE VOLUME –/+ to adjust the volume of the headphones.

The level indicator appears, showing the volume of the headphones.

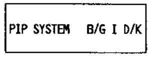
Note:
- If the sound of the PIP picture is not clear or is inaudible, change the sound system manually (see next page for details).

PIP SOUND SYSTEM

The sound system of the PIP picture is automatically selected, but if the sound is not clear or is inaudible, you can select the sound system manually.

Note:
- You cannot select the sound system manually when in VIDEO mode.

1. Press PIP SOUND SYSTEM repeatedly.



→ B/G I D/K → M ┐

PIP COLOUR SYSTEM

The colour system of the PIP picture is automatically selected, but if the PIP picture is not clear or no colour appears, you can select the colour system of the PIP picture manually.

1. Press PIP COLOUR SYSTEM repeatedly.

When the PIP is in TV mode (channels 1 to 99):

→ PAL → SECAM → NTSC3.58 → NTSC4.43 ┘

When the PIP is in VIDEO mode or channel 0 (AV mode):

→ AUTO → PAL → SECAM → NTSC3.58 → NTSC4.43 ┘

AUTO:
Automatic colour system selection.

Notes:
- The size of the PIP picture changes depending on the colour system.
- AUTO may not function properly depending on signal quality. If the picture is abnormal in AUTO mode, select another colour system manually.

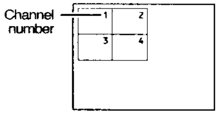
PIP CH SEARCH

You can view frozen PIP pictures of TV programmes being broadcast by stations that you have allocated to channels on your TV. PIP pictures appear four at a time, in channel number order.

Condition:
- Display the PIP picture.

1. Press PIP CH SEARCH.

Frozen PIP pictures of four TV programmes appear.



- Each time you press PIP CH SEARCH, frozen PIP pictures of four TV programmes appear in channel number order.

2. To release this function, press PIP ON/OFF.

A normal PIP picture returns.

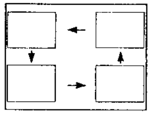
Notes:
- The following channels do not appear during channel search:
  - – Channel 0 (AV channel)
  - – skipped channels
- No PIP picture sound is output through the headphones during channel search.
- To avoid screen burn, PIP CH SEARCH is release automatically after about 15 minutes.

PIP POSITION

The PIP picture can be in one of four positions on the screen.

1. Press PIP POSITION repeatedly.

Each time you press the button, the PIP picture moves counterclockwise.

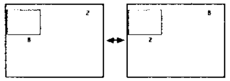


PIP SWAP

You can switch the positions of the Main and PIP pictures.

1. Press PIP SWAP.

- Each time you press PIP SWAP, the main picture and PIP picture swap.



Note:
- If the TV is receiving no broadcast in the PIP picture channel, and you press PIP SWAP, the screen turns blue and the PIP picture disappears. If this happens, even if you press PIP SWAP or PIP ON/OFF, the PIP picture does not appear. Select a main picture channel that has a broadcast signal.

PIP FREEZE

You can freeze the PIP picture.

1. Press PIP FREEZE.

The PIP picture freezes (becomes a still picture).

To release the frozen PIP picture:
Press PIP FREEZE again.

Notes:
- If you press the PIP FREEZE button when no PIP picture is displayed, a frozen (still) PIP picture appears on screen.
  To clear the PIP picture, press PIP ON/OFF.
- To avoid screen burn, PIP FREEZE is release automatically after about 15 minutes.

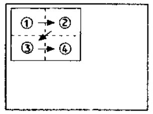
PIP STROBE

The PIP STROBE function stores up to four pictures in memory, recorded in 0.1 second intervals.

Condition:
- Display the PIP picture.

1. Press PIP STROBE.

The four recorded frames appear in the PIP picture.



To release the PIP STROBE function:
Press PIP ON/OFF.

Notes:
- You can also release the PIP STROBE function by pressing PIP FREEZE.
- To avoid screen burn, PIP STROBE is release automatically after about 15 minutes.

SURROUND SOUND

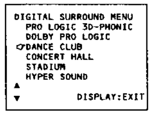
DOLBY PRO LOGIC 3D-PHONIC

You can enjoy the ambience of Dolby Surround with Dolby Surround encoded programmes.

Note:
- This function works only with Dolby Surround encoded programmes.

1. Press SURROUND.

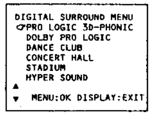
The DIGITAL SURROUND MENU appears, showing the currently active function.


DIGITAL SURROUND MENU
PRO LOGIC 3D-PHONIC
DOLBY PRO LOGIC
☞DANCE CLUB
CONCERT HALL
STADIUM
HYPER SOUND
DISPLAY:EXIT

To cancel the function:
Press SURROUND again.

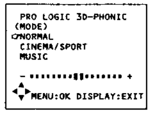
Note:
- If the DIGITAL SURROUND MENU does not appear, press HEADPHONE SELECT to change the headphone mode to ◀:MAIN/∩:MAIN mode or ◀:MAIN/∩:PIP mode and then repeat the procedure.

2. Press CONTROL ▼/▲ to select PRO LOGIC 3D-PHONIC.

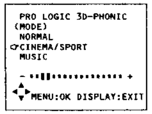

DIGITAL SURROUND MENU
☞PRO LOGIC 3D-PHONIC
DOLBY PRO LOGIC
DANCE CLUB
CONCERT HALL
STADIUM
HYPER SOUND
MENU:OK DISPLAY:EXIT

3. Press MENU.

The PRO LOGIC 3D-PHONIC menu appears.


PRO LOGIC 3D-PHONIC
(MODE)
☞NORMAL
CINEMA/SPORT
MUSIC
- +
MENU:OK DISPLAY:EXIT

4. Press CONTROL ▼/▲ to select the desired mode.


PRO LOGIC 3D-PHONIC
(MODE)
NORMAL
☞CINEMA/SPORT
MUSIC
- +
MENU:OK DISPLAY:EXIT

NORMAL:
For normal programmes

CINEMA/SPORT:
For cinema and sports programmes

MUSIC:
For music programmes

To adjust the effect level:
Press CONTROL ◀/▶ buttons.

● This completes the procedure. Press DISPLAY twice to exit the menu.

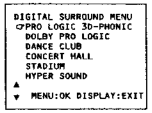
Note:
- If, while using this function, you change the headphone mode to ◀:OFF/∩:MAIN mode, the 3D HEADPHONE function (see next page) activates automatically.

DIGITAL SURROUND

You can enjoy any one of the four Digital surround functions.

1. Press SURROUND.

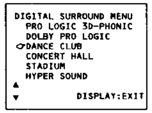
The DIGITAL SURROUND MENU appears, showing the currently active function.


DIGITAL SURROUND MENU
☞PRO LOGIC 3D-PHONIC
DOLBY PRO LOGIC
DANCE CLUB
CONCERT HALL
STADIUM
HYPER SOUND
MENU:OK DISPLAY:EXIT

To cancel the function:
Press SURROUND again.

Note:
- If the DIGITAL SURROUND MENU does not appear, press HEADPHONE SELECT to change the headphone mode to ◀:MAIN/∩:MAIN mode or ◀:MAIN/∩:PIP mode and then repeat the procedure.

2. Press CONTROL ▼/▲ to select the function.


DIGITAL SURROUND MENU
PRO LOGIC 3D-PHONIC
DOLBY PRO LOGIC
☞DANCE CLUB
CONCERT HALL
STADIUM
HYPER SOUND
DISPLAY:EXIT

DANCE CLUB:
For the atmosphere of a dance club

CONCERT HALL:
For the atmosphere of a concert hall

STADIUM:
For the atmosphere of a stadium

HYPER SOUND:
To give monaural sound the spacious feeling of stereo sound

Notes:
- Only HYPER SOUND works well with monaural sound programmes.
- HYPER SOUND does not work well with stereo sound programmes.
- If, while using this function, you change the headphone mode to ◀:OFF/∩:MAIN mode, Headphone surround (see next page) activates automatically. However, HYPER SOUND becomes 3D HEADPHONE.

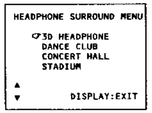
HEADPHONE SURROUND

You can enjoy surround sound on your headphones. You can enjoy any one of the four Headphone surround functions.

Conditions:
- Before performing this procedure, see "To listen to the sound using headphones" on page 15.
- After connecting headphones to the TV's headphone jack, press HEADPHONE SELECT to change headphone mode to ◀:OFF/∩:MAIN mode.

1. Press SURROUND.

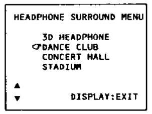
The HEADPHONE SURROUND MENU appears, showing the currently active function.


HEADPHONE SURROUND MENU
☞3D HEADPHONE
DANCE CLUB
CONCERT HALL
STADIUM
DISPLAY:EXIT

To cancel the function:
Press SURROUND again.

Note:
- If headphone mode is anything other than ◀:OFF/∩:MAIN mode, the HEADPHONE SURROUND MENU does not appear and the HEADPHONE SURROUND function does not work.

2. Press CONTROL ▼/▲ to select the desired function.


HEADPHONE SURROUND MENU
3D HEADPHONE
☞DANCE CLUB
CONCERT HALL
STADIUM
DISPLAY:EXIT

3D HEADPHONE:
For a broad, atmospheric sound

DANCE CLUB:
For the atmosphere of a dance club

CONCERT HALL:
For the atmosphere of a concert hall

STADIUM:
For the atmosphere of a stadium

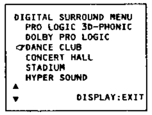
DOLBY PRO LOGIC SURROUND

You can also use Dolby Pro Logic Surround sound with 4 or 5 speakers. If you wish to use this system, additional amplifiers and speakers are required. For details, see "To use 4 or 5 speakers" on page 28.

Note:
- This function works only with Dolby Surround encoded programmes.

1. Press SURROUND.

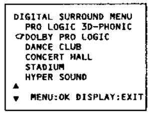
The DIGITAL SURROUND MENU appears, showing the currently active function.


DIGITAL SURROUND MENU
PRO LOGIC 3D-PHONIC
DOLBY PRO LOGIC
☞DANCE CLUB
CONCERT HALL
STADIUM
HYPER SOUND
DISPLAY:EXIT

To cancel the function:
Press SURROUND again.

Note:
- If the DIGITAL SURROUND MENU does not appear, press HEADPHONE SELECT to change the headphone mode to ◀:MAIN/∩:MAIN mode or ◀:MAIN/∩:PIP mode and then repeat the procedure.

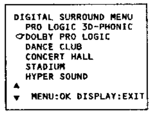
2. Press CONTROL ▼/▲ to select DOLBY PRO LOGIC.


DIGITAL SURROUND MENU
PRO LOGIC 3D-PHONIC
☞DOLBY PRO LOGIC
DANCE CLUB
CONCERT HALL
STADIUM
HYPER SOUND
MENU:OK DISPLAY:EXIT

Note:
- If, while using this function, you change the headphone mode to ◀:OFF/∩:MAIN mode, the 3D HEADPHONE function (see above) activates automatically. However, note that you cannot use Dolby Pro Logic Surround with headphones.

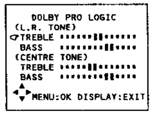
To adjust the tone of the front or centre speakers

1. Press SURROUND to display the DIGITAL SURROUND MENU, then press CONTROL ▼/▲ to select DOLBY PRO LOGIC.


DIGITAL SURROUND MENU
PRO LOGIC 3D-PHONIC
☞DOLBY PRO LOGIC
DANCE CLUB
CONCERT HALL
STADIUM
HYPER SOUND
MENU:OK DISPLAY:EXIT

2. Press MENU twice.

The tone adjustment menu appears.


DOLBY PRO LOGIC
(L.R. TONE)
☞TREBLE
BASS
(CENTRE TONE)
TREBLE
BASS
MENU:OK DISPLAY:EXIT

3. Press CONTROL ▼/▲ to select the desired item, and press CONTROL ◀/▶ to adjust the level.

(L. R. TONE):
Adjusts the tone of the front speakers.

(CENTRE TONE):
Adjusts the tone of the centre speaker.

◀	Item	▶
Low	BASS	High
Low	TREBLE	High

Note:
- "(CENTRE TONE)" is not displayed when CENTRE MODE is set to PHANTOM (see page 28).

● This completes the procedure. Press DISPLAY three times to exit the menu.

TELETEXT

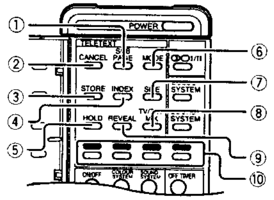
CAUTION:

- To avoid screen burn, when watching teletext, set CONTRAST and BRIGHTNESS to lower than usual (to adjust contrast and brightness, see "PICTURE/SOUND ADJUSTMENT" on page 18).

Notes:

- If you have trouble receiving teletext broadcasts, consult your local dealer or the teletext station.
- The teletext cannot be displayed in the PIP picture.

(Inside buttons)

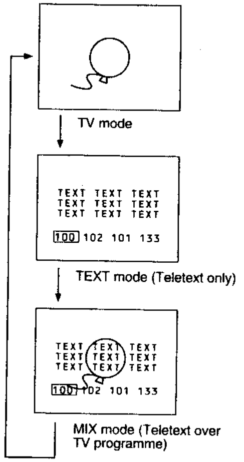

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
POWER
TELETEXT
CANCEL
SUB PAGE
MODE
STORE
INDEX
SIZE
SYSTEM
HOLD
REVEAL
TV/TXT/MIX
SYSTEM
ON/OFF
OFF TIMER

① SUB PAGE button
② CANCEL button
③ STORE button
④ INDEX button
⑤ HOLD button
⑥ MODE button
⑦ SIZE button
⑧ TV/TXT/MIX button
⑨ REVEAL button
⑩ Colour buttons

BASIC TELETEXT OPERATION

You can view two types of teletext broadcasts on this TV: Fastext and WST. The TV automatically recognizes the type of teletext broadcast.

1. **Select a channel with a teletext broadcast.**
2. **Press TV/TXT/MIX repeatedly to select TEXT or MIX mode.**


TV mode
TEXT TEXT TEXT
TEXT TEXT TEXT
TEXT TEXT TEXT
100 102 101 133
TEXT mode (Teletext only)
TEXT TEXT TEXT
TEXT TEXT TEXT
TEXT TEXT TEXT
100 102 101 133
MIX mode (Teletext over TV programme)

3. **Select a page number.**

Browse:
Press CHANNEL (PAGE) –/+.

Direct selection:
Press the number buttons to enter a three-digit page number.

Colour button selection:
Press a colour button to select the corresponding page number on the bottom line of the screen.

Note:

- Category names of teletext pages may appear instead of page numbers.

● To return to TV mode, press TV/VIDEO.

Note:

- *You can also return to TV mode by pressing TV/TXT/MIX repeatedly.*

CANCEL

You can search for a teletext page while watching TV.

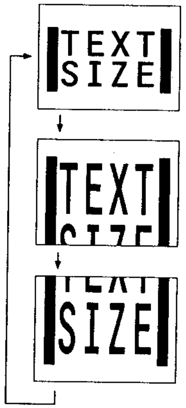
1. **Select a teletext page.**
   The TV searches for a teletext page.
2. **Press CANCEL.**
   The TV programme appears. When the TV finds the teletext page, its page number appears in the upper left of the screen.

3. **Press TV/TXT/MIX when the page number is on the screen.**

SIZE

You can double the height of the teletext display.

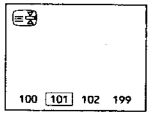
1. **Press SIZE repeatedly.**


TEXT
SIZE
TEXT
SIZE

HOLD

You can hold a teletext page on the screen for a desired length of time, even while several other teletext pages are received.

1. **Press HOLD.**
   ⊞ is displayed in the upper left of the screen, and the teletext page is held on the screen.


100 101 102 199

To release the hold mode:
Press HOLD again.

Note:

- You can also release the hold mode by selecting another page or by pressing INDEX.

INDEX

Just press INDEX to return to the index page.

1. **Press INDEX.**

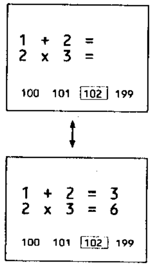
Fastext/WST:
Returns to page 100 or a previously specified page.

LIST mode:
Returns to the page number displayed in the lower left area of the screen.

REVEAL

Some teletext pages include hidden text (such as answers to a quiz).

1. **Press REVEAL.**
   Each time you press REVEAL, text is hidden or revealed.


1 + 2 =
2 x 3 =
100 101 102 199
1 + 2 = 3
2 x 3 = 6
100 101 102 199

LIST MODE

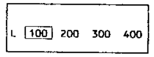
If you store the numbers of teletext pages you view often, you can quickly call up the desired teletext page whenever you like.

Note:

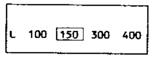
- You can store up to 64 pages in memory. You can store four pages in each channel from 1 to 15 (60 pages), and four pages that are the same for all channels above channel 15 (4 pages).

To store the page numbers

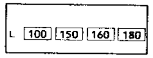
1. **Press MODE to engage LIST mode.**


L 100 200 300 400

2. **Press a colour button, then enter the number of the teletext page.**
   To assign other pages to remaining colour buttons, repeat this operation.

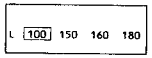

L 100 150 300 400

3. **Press and hold STORE.**
   The four page numbers blink white to indicate that they are stored in memory.

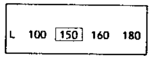

L 100 150 160 180

To call up a stored page

1. **Press MODE to engage LIST mode.**


L 100 150 160 180

2. **Press a colour button to which a page has been assigned.**


L 100 150 160 180

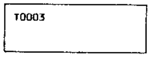
SUB PAGE

Some teletext pages include sub-pages that are automatically displayed. You can hold any sub-page, or view it at any time.

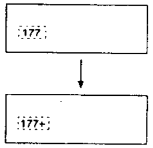
1. **Call up a teletext page with sub-pages.**

2. **Press SUB PAGE.**
   "T✱✱✱✱" appears in the upper left of the screen.

3. **Enter the number of the sub-page.**



Example:
To select the 3rd sub-page, press number buttons "0", "0", "0" and "3". After "+" appears to the right of the page number on the bottom of the screen, the sub-page appears and is held.



Note:

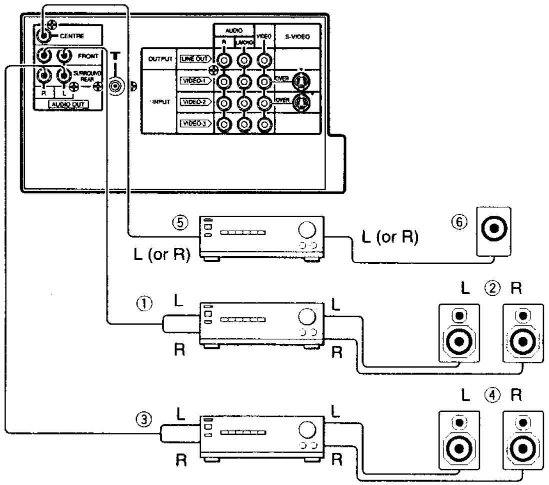
- When a category name instead of a page number is displayed on the bottom line of the screen, "+" does not appear.

CONNECTING AMPLIFIERS AND SPEAKERS

Condition:
- When connecting audio amplifiers and speakers to your TV:
  - Turn the TV and audio amplifiers' OFF before connecting them.
  - Set the audio amplifiers volume to minimum.
  - Refer to manuals provided with the amplifier and speakers for further details.

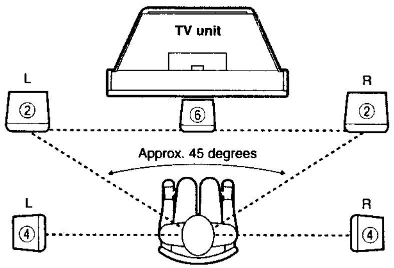
①, ③: Stereo amplifier
②: Front speakers (magnetic-shielded type, L, R)
④: Surround speakers (L, R)
⑤: Stereo amplifier (or monaural amplifier)
⑥: Centre speaker (magnetic-shielded type)

(Terminals on rear)



Notes:
- The AUDIO OUT terminal on your TV is for connecting to an audio system. The output level is controlled by the Volume controls of your TV.
- If you connect a Dolby Pro Logic Surround decoder to your TV, use the FRONT L and R jacks. Your TV has Dolby Pro Logic Surround functions, so if you connect an external decoder, turn off all surround functions on your TV.

Positioning speakers



Notes:
- For a good effect place speakers ④ 1.0 m above the seated listener's head.
- For a good effect place speaker ⑥ as close as possible to the TV along the same line as or behind, speakers ②.
- Use magnetic-shielded speakers for speakers ② and ⑥ to avoid TV interference.

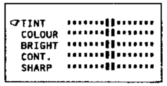
To use 2 external speakers

1. Connect stereo amplifier ① and front speakers ② to your TV.

2. Turn your TV ON, and press VOLUME –/+ to set the volume to the lowest setting.

3. Press any CONTROL button.

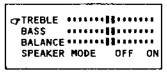
The picture adjustment menu appears.



```
TINT
COLOUR
BRIGHT
CONT.
SHARP
```

4. Press CONTROL ▼/▲ repeatedly to display the sound adjust menu.

The sound adjustment menu appears.



```
TREBLE
BASS
BALANCE
SPEAKER MODE     OFF   ON
```

Note:
- If the sound adjustment menu is not displayed, press SURROUND twice to turn off the SURROUND function, and then repeat the procedure from step 3.

5. Press CONTROL ▼/▲ to select SPEAKER MODE.

6. Press CONTROL ◀/▶ to select OFF.

The TV's speakers become silent and the menu disappears after several seconds.

To output sound from the TV speakers:
Set SPEAKER MODE to ON.

7. Turn your audio amplifier ON, and return the volume of your audio amplifier to the normal setting.

Note:
- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

8. Press VOLUME –/+ to adjust the volume.

● This completes the procedure.

To use 4 or 5 speakers

You can enjoy Dolby Pro Logic Surround sound with 4 or 5 speakers.

1. Connect audio amplifiers and speakers to the TV.

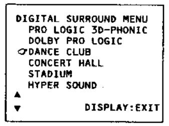
Do one of the following:

- 🄰: Connect stereo amplifier ③ and surround speakers ④. This leaves out the centre speaker.
- 🄱: Connect stereo amplifiers ①, ③, front speakers ②, and surround speakers ④. This uses the TV's speakers as the centre speakers.
- 🄲: Connect stereo amplifiers ①, ③, stereo amplifier (or monaural amplifier) ⑤, front speakers ②, surround speakers ④, and centre speaker ⑥. If you use this method, do not output sound from the TV's speakers.

2. Turn your TV ON, and press VOLUME –/+ to set the volume to the lowest setting.

3. Press SURROUND.

The DIGITAL SURROUND MENU appears, showing the corrently selected setting.

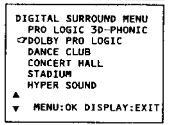


```
DIGITAL SURROUND MENU
  PRO LOGIC 3D-PHONIC
  DOLBY PRO LOGIC
 ☞DANCE CLUB
  CONCERT HALL
  STADIUM
  HYPER SOUND
▲
▼           DISPLAY:EXIT
```

Note:

- If the DIGITAL SURROUND MENU does not appear, press HEADPHONE SELECT to change the headphone mode to ◀:MAIN/∩:MAIN mode or ◀:MAIN/∩:PIP mode and then repeat the procedure.

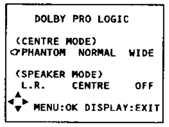
4. Press CONTROL ▼/▲ to select DOLBY PRO LOGIC.



```
DIGITAL SURROUND MENU
  PRO LOGIC 3D-PHONIC
 ☞DOLBY PRO LOGIC
  DANCE CLUB
  CONCERT HALL
  STADIUM
  HYPER SOUND
▲
▼  MENU:OK DISPLAY:EXIT
```

5. Press MENU three times.

The mode setting menu appears, showing the currently selected setting.



```
     DOLBY PRO LOGIC

 (CENTRE MODE)
☞PHANTOM  NORMAL  WIDE

 (SPEAKER MODE)
  L.R.     CENTRE    OFF
  ▲
◀ ▶
  ▼  MENU:OK DISPLAY:EXIT
```

Note:

- To avoid screen burn, the menu disappears automatically if it remains inactive for about one minute.

6. Press CONTROL ▼/▲ to select an item, and press CONTROL ◀/▶ to change its setting.

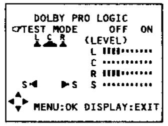
Method	Item	
	CENTRE MODE	SPEAKER MODE
🄰	PHANTOM	L. R.
🄱	NORMAL	CENTRE
🄲	NORMAL	OFF
	WIDE	

Note:

- Set CENTRE MODE to WIDE when using a full-range speaker as the centre speaker. Frequencies of 100 Hz or lower are output from the centre speaker to give Dolby Surround an even greater impact.

7. Press DISPLAY twice.

The speaker level setting menu appears.



```
     DOLBY PRO LOGIC
☞TEST MODE       OFF  ON
    L C R      (LEVEL)
              L ||||........
              C ............
              R ||||........
 S◀      ▶S   S ............
  ▲
◀ ▶
  ▼  MENU:OK DISPLAY:EXIT
```

Note:

- To avoid screen burn, the menu disappears automatically if it remains inactive for about one minute.

8. Turn your audio amplifier ON, and return the volume of your audio amplifier to the normal setting.

Note:

- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

9. Press CONTROL ◀/▶ to set TEST MODE to ON, then press VOLUME –/+ to adjust the volume of the entire speaker system.

Test signals alternate between the speakers.

Note:

- To avoid screen burn, if you turn on TEST MODE and leave the TV inactive for about one minute, the menu disappears automatically.

10. Press CONTROL ◀/▶ to adjust the level of each of the speakers so that their volumes are the same at the listening position (the place where the person is sitting in the diagram, see page 26).

L, R:
Front speaker L, R
C:
Centre speaker
S:
Surround speakers

Notes:

- When CENTRE MODE is set to PHANTOM, the volume of C: (Centre speaker) cannot be adjusted.
- If the volume of both speakers is not the same even after adjusting the volume, adjust the volume of your audio amplifier.

● This completes the procedure.
Press DISPLAY twice to exit the menu.

TROUBLESHOOTING

- If the plug is disconnected from the AC socket, or the TV aerial has problems, you may think there is a problem with the TV itself. Be sure to check the following before calling for service.

IMPORTANT

- Review all instructions in this manual.

■ GENERAL

Problem	Action
No power supply.	Insert the plug in an AC socket. Press the Main Power button (see page 8).
No picture or sound.	Check aerial connections (see page 6). Press TV/VIDEO to select the correct mode (see page 16). Press COLOUR SYSTEM to select the correct colour system (see page 17). Press SOUND SYSTEM to select the correct sound system (see page 17).
The power shuts off automatically.	Press POWER to turn the power on again (see page 8, 14). Turn off the AUTO SHUTOFF function (see page 19).
Inoperable remote control.	Replace the batteries (see page 7). Insert the batteries correctly (see page 7). Use the remote control within about 7 metres of the TV.

■ PICTURE

Problem	Action
Poor colour.	Adjust COLOUR and BRIGHTNESS (see page 18). Press COLOUR SYSTEM to select the correct colour system (see page 17). Press PICTURE MODE to select STANDARD (see page 17). Press THEATRE STATUS to turn the THEATRE STATUS function off (see page 18).
Lines or streaks in picture (interference).	Move the components apart until the interference is eliminated. Reposition the aerial.
Spots (crosstalk).	Reposition the aerial. Replace with an aerial with better directionality.
Double pictures (ghosts).	Reposition the aerial. Replace with an aerial with better directionality.
Snowy pictures (noise).	Check aerial connections. Redirect the aerial. Replace or repair the aerial.
The screen turns blue.	Broadcast not being received. Select another channel. No input signal from external device. Input the signal.

■ SOUND

Problem	Action
No sound from the TV's speakers.	Press HEADPHONE SELECT (see page 15, 20). Set SPEAKER MODE to ON (see page 20).
No sound from external speakers.	Press HEADPHONE SELECT (see page 15, 20). Turn your audio amplifiers on, and set them to the normal volume (see page 30, 31).
You connected headphones to the TV, but sound still comes from the speakers.	Press HEADPHONE SELECT (see page 15, 20).
Cannot adjust volume of the headphones.	Use the HEADPHONE VOLUME –/+ buttons to adjust the volume (see page 15, 20).
The Multi sound function, headphone surround functions, and other sound functions do not work with the headphone's sound.	Press HEADPHONE SELECT to select ◀:OFF/∩:MAIN mode (see page 15, 20).
No stereo sound.	Press ꝏI/Ⅱ (multi-sound) to select stereo sound (see page 17).
No "SUB-I" or "SUB-II" sound in a multisound broadcast.	Press ꝏI/Ⅱ (multi-sound) to select the correct mode (see page 17).
Surround function does not function properly.	Dolby Pro Logic Surround and DOLBY PRO LOGIC 3D-PHONIC work properly only with programmes encoded in Dolby Surround. Functions other than HYPER SOUND and the Headphone surround functions work properly only with stereo programmes. HYPER SOUND works properly only with monaural programmes.

■ TELETEXT

Problem	Action
No teletext reception.	Tune to a teletext broadcast channel (see page 24). We recommend that you not videotape teletext, as it may not be recorded correctly.

The following are normal and are NOT malfunctions:

- It is normal to feel a surge of static electricity when you touch the screen.
- If you jolt this TV, the picture may shake. This is not a malfunction.
- The TV may emit a crackling sound due to a sudden change in temperature. There is no problem unless the picture or sound is abnormal.
- This TV is equipped with a microcomputer that may operate abnormally due to interference from external components. If this happens, turn off the main power and disconnect the power cord from the AC socket. The reconnect the AC socket and turn on the main power again.

SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠)on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Don't short between the LIVE side ground and ISOLATED(NEUTRAL) side ground or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⏚) side GND and EARTH : (⊕) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
5. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B_1 POWER SUPPLY).
6. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
7. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
8. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
9. **Isolation Check**
   (Safety for Electrical Shock Hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

(1) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second.
(. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

(2) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

- **Alternate Check Method**

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15µF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

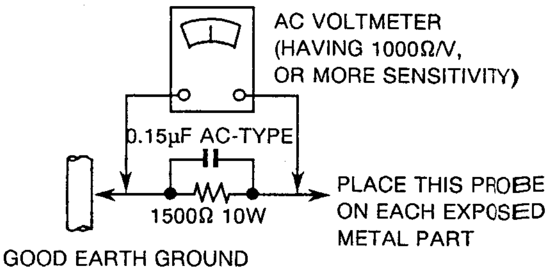
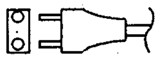
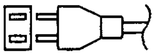
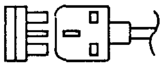
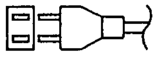


Fig. A

MAIN DIFFERENCE LIST

⚠	Parts name	Parts No.				Remark
		AV-61PRO	AV-61PRO-*A*	AV-61PRO-*HK*	AV-61PRO-*SC*	
⚠	POWER CORD	QMPK030-200-K 	QMPR010-200-E2 	QMPN040-200-E2 	QMPR010-200-E2 	
⚠	RATING LABEL	CM22522-026(R)	CM22522-029(R)	CM22522-028(R)	CM22522-027(R)	Model : Indicated lower-right
	POS LABEL	CP30976-008(R)	CP30976-011(R)	CP30976-010(R)	CP30976-009(R)	Packing case
⚠	CCIB MARK	———	———	———	CM48097-002	Rear cover
⚠	SEAL	———	———	———	CM48098-001	Rear cover
	PLUG ADAPTER	———	CEMK002-001	———	———	Accessory

INSTALLATION

1. INSTALLATION SITE

1. The rear of this set is provided with a cooling fan or ventilation openings. Install the set more than 10 cm from a wall and in a location with good ventilation.
2. Avoid the following types of locations.
   1) Unstable locations (location must be able to withstand heavy weight)
   2) Locations subjected to direct sunlight
   3) Near stoves or other heating devices
   4) Locations subjected to humidity or oily smoke
   5) Dusty locations
   6) Locations with strong vibration

2. INSTALLATION ADJUSTMENT

When installing, moving or changing the orientation of the set, perform static convergence adjustment according to the following procedure.

1. Supply an input signal or receive a broadcast.
   * If a signal is absent, without supplying an input, select a video input (1 - 4).
2. Press the [MENU] keys of the remote control unit and at the MENU screen.
3. Select "CONVERGENCE" with [CONTROL ▼/△] keys.
4. Press the [VOLUME +] or [CONTROL +] keys to display the CONVERGENCE screen.
5. Select "RED" with [CONTROL ▼/△] keys.
6. Press the [VOLUME +] or [CONTROL +] keys to produce a cross-hatch display on the screen (Fig. 1).
7. Adjust to overlap the red line on the green line (A yellow line is produced when red and green are precisely overlapped) (Fig. 2).
   - Vertical up / down : [CHANNEL -/+] or [CONTROL ▼/△] keys
   - Horizontal left / right : [VOLUME -/+] or [CONTROL -/+] keys
8. After adjusting, press the [DISPLAY] key.
9. Select "BLUE" with [MENU] keys.
10. Adjust to overlap the blue line on the green line (A cyan line is produced when blue and green are precisely overlapped).
11. After adjusting, press the [DISPLAY] key to return the MENU screen.

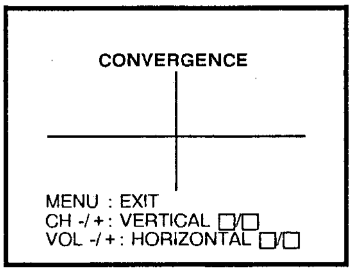


Fig. 1

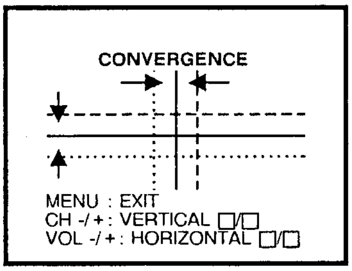


Fig. 2

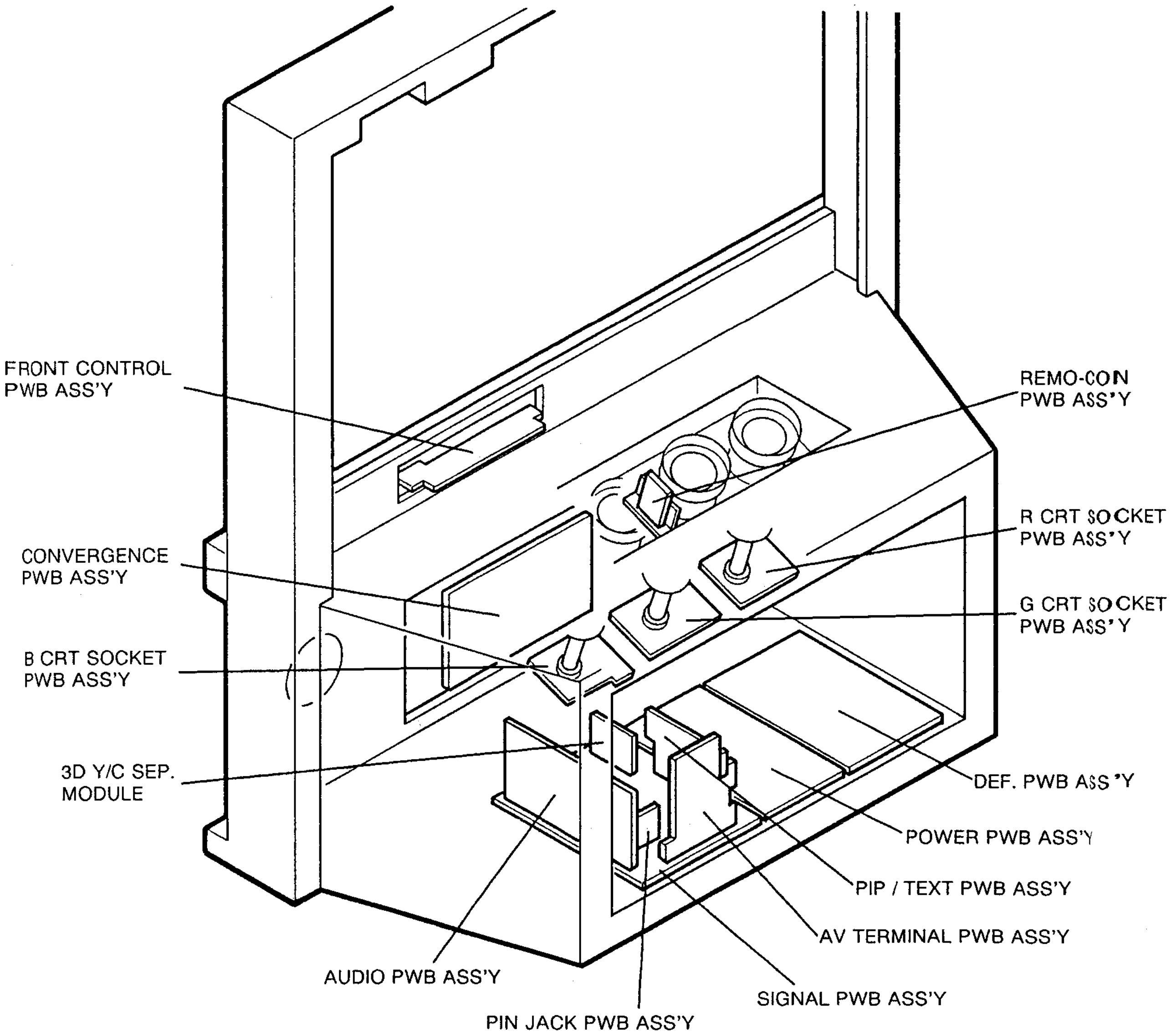
MAIN PARTS LOCATION

■PWB ASS'Y ARRANGEMENT

The PWB ASS'Ys and modules composition is indicated below.

- ● SIGNAL PWB ASS'Y (SKB-1001A)
  [on SIGNAL PWB ASS'Y]
  - ● AV TERMINAL PWB ASS'Y (SKB-1201A)
  - ● PIP / TEXT PWB ASS'Y (SKB-0T001A)
  - ● AUDIO PWB ASS'Y (SKB-6001A)
    [on AUDIO PWB ASS'Y]
    - ● PIN JACK PWB ASS'Y (SKB-06101A)
  - ○ 3D Y/C SEP. MODULE (SKB-0Y001A)
- ● POWER PWB ASS'Y (SKB-9001A)
- ● DEF. PWB ASS'Y (SKB-2001A)
- ● G CRT SOCKET PWB ASS'Y (SKB-3001A)
- ● B CRT SOCKET PWB ASS'Y (SKB-3002A)
- ● R CRT SOCKET PWB ASS'Y (SKB-3003A)
- ● CONVERGENCE PWB ASS'Y (SKB-8001A)
- ● FRONT CONTROL PWB ASS'Y (SKB-8101A)
- ● REMO-CON PWB ASS'Y (SKB-8102A)

■TOTAL : PWB ASS'Y = 13
: MODULE = 1


FRONT CONTROL PWB ASS'Y
CONVERGENCE PWB ASS'Y
B CRT SOCKET PWB ASS'Y
3D Y/C SEP. MODULE
AUDIO PWB ASS'Y
PIN JACK PWB ASS'Y
SIGNAL PWB ASS'Y
AV TERMINAL PWB ASS'Y
PIP / TEXT PWB ASS'Y
POWER PWB ASS'Y
DEF. PWB ASS'Y
G CRT SOCKET PWB ASS'Y
R CRT SOCKET PWB ASS'Y
REMO-CON PWB ASS'Y

SPECIFIC SERVICE INSTRUCTIONS

1. SCREEN HANDLING CAUTIONS

■ SCREEN STORAGE

Store the SCREEN ASS'Y in a standing position in order to avoid deformation. If the screen is stored horizontally, there is risk of deforming the screen face.

When necessary to place the SCREEN ASS'Y horizontally, position the screen side upwards and be sure to place spacers between the screen and resting site (floor or stand etc.) to prevent the screen from sagging.

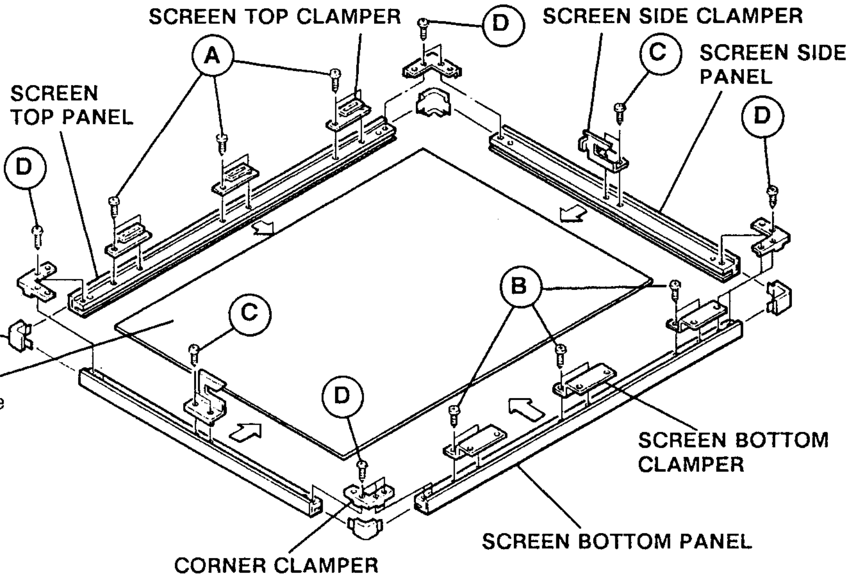
■ SCREEN SURFACE

Since the screen surface is easily scratched or soiled, use ample care when handling.

■ DISASSEMBLY PROCEDURE

If the screen or screen panel need to be replaced, remove the screws indicated below.

Ⓐ : 6 (2 + 2 + 2) screws
Ⓑ : 6 (2 + 2 + 2) screws
Ⓒ : 4 (2 + 2)screws
Ⓓ : 10 (2 + 2 + 3 + 3) screws


SCREEN TOP CLAMPER
Ⓓ
SCREEN SIDE CLAMPER
Ⓐ
Ⓒ
SCREEN SIDE PANEL
SCREEN TOP PANEL
Ⓓ
Ⓓ
CORNER BRACKET
Ⓑ
Ⓒ
Ⓓ
SCREEN BOTTOM CLAMPER
SCREEN BOTTOM PANEL
CORNER CLAMPER

Leave the screen with frenel lens and double lenticular lens attached.
If cannot be disassembled further.

2. PROJECTION UNIT REPLACEMENT

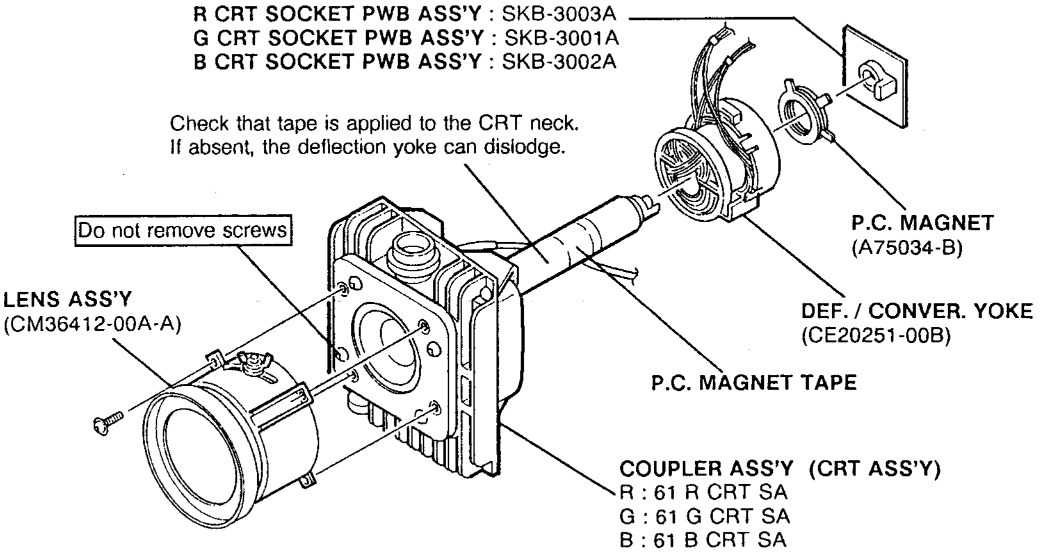
■ ADJUSTMENT DURING REPLACEMENT

When replacing the three R, G and B projection units, first replace the R and B units and perform convergence adjustments with reference to the G unit. Then replace the G unit. Use care not to simultaneously remove all three projection units.

■ DISASSEMBLY CAUTION

The projection units include locations which are not to be disassembled during service. When replacing projection unit parts, disassemble to the state indicated in the figure below.

The figure indicates screws and wires which are not to be removed. Use care not to remove these.


R CRT SOCKET PWB ASS'Y : SKB-3003A
G CRT SOCKET PWB ASS'Y : SKB-3001A
B CRT SOCKET PWB ASS'Y : SKB-3002A
Check that tape is applied to the CRT neck.
If absent, the deflection yoke can dislodge.
Do not remove screws
LENS ASS'Y
(CM36412-00A-A)
P.C. MAGNET
(A75034-B)
DEF. / CONVER. YOKE
(CE20251-00B)
P.C. MAGNET TAPE
COUPLER ASS'Y (CRT ASS'Y)
R : 61 R CRT SA
G : 61 G CRT SA
B : 61 B CRT SA

3. DISASSEMBLY PROCEDURE

(1) EXTERNAL COMPONENTS (FRONT)

■ SCREEN ASS'Y

1. Remove 3 screws Ⓐ (at left and right of the screen bottom).
2. The SCREEN ASS'Y is secured by hooks. Raise slightly to disengage of the screen from the hooks.
3. Place the screen with face upwards on a flat stand.

※ Refer to "SCREEN HALNDLING CAUTIONS" on page 1-6 when remove the screen itself and the screen handling.

※ NOTE :

- Because of the large size, at least two persons are recommended for removal and reassembly.
- Use care not to scratch the screen during work.
- During assembly, be sure to engage the left and right tabs wiyh the cabinet mounting positions.
- When transporting the SCREEN ASS'Y, avoid grasping the top of the screen panel, instead grasp the left and right areas.

■ CONTROL PANEL

1. Take out the speaker grille by pulling it outward (pull the top edge to take out) .
2. Remove 4 screws Ⓑ.
3. Pull the CONTROL PANEL outward.

■ FRONT CONTROL PWB ASS'Y

1. Take out the speaker grille (pull the top edge to take out) .
2. Remove 2 screws Ⓒ (with washers) .
3. Pull the FRONT CONTROL PWB ASS'Y outward.

■ FRONT BOARD

1. Take out the speaker grille (pull the top edge to take out) .
2. Loosen 1 screw Ⓓ.
3. Remove 1 screw Ⓔ.
4. Shift the FRONT BOARD slightly toward the left and pull outward to take out.

* Disengage 6 tabs to take out the CONVERGENCE PWB ASS'Y

■ FOCUS PACK

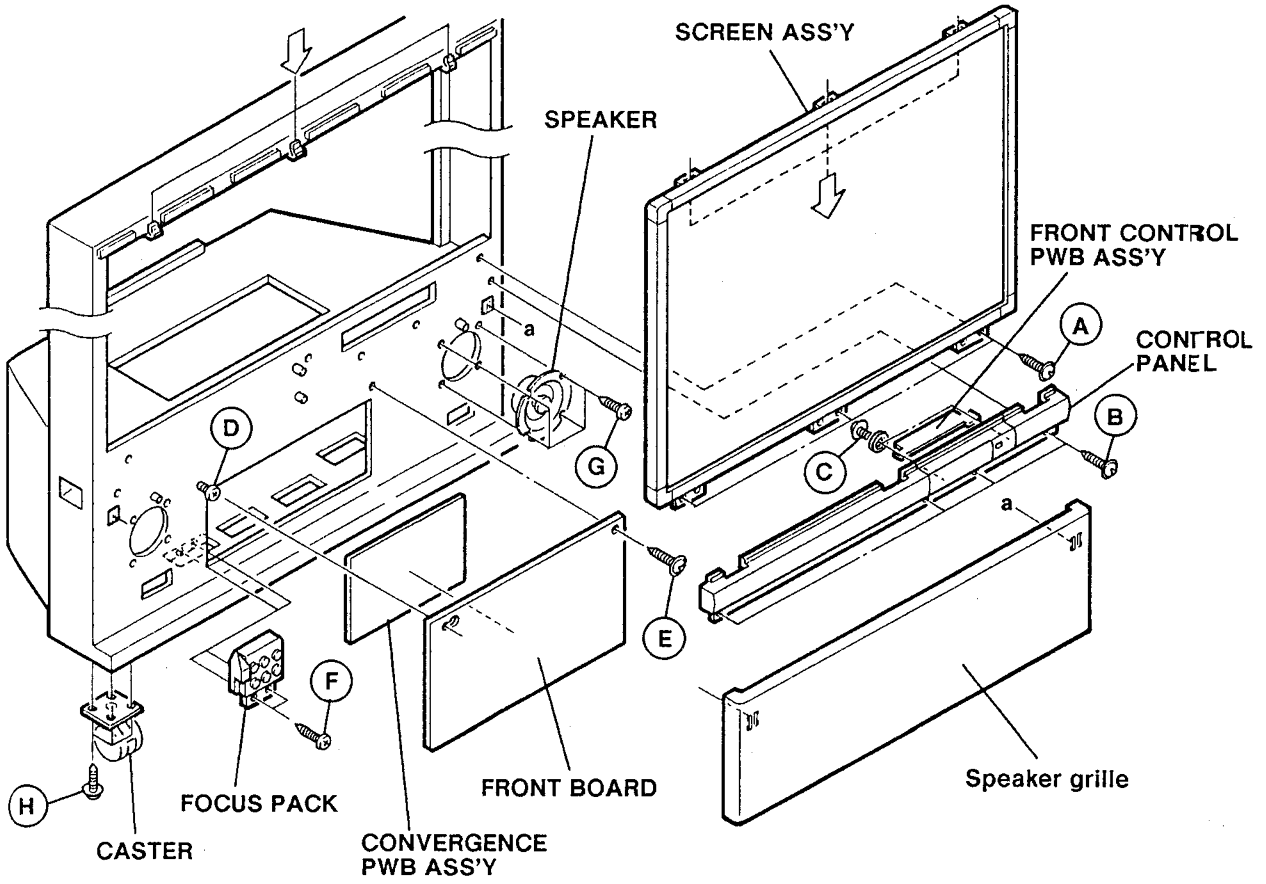
1. Take out the speaker grille.
2. Take out the FRONT BOARD.
3. Remove 2 screws Ⓕ.
4. Take out the FOCUS PACK.

■ SPEAKER

1. Take out the speaker grille.
2. Remove 4 screws Ⓖ.
3. Pull the SPEAKER outward.
4. Disengage the speaker cord and take out the SPEAKER.

■ CASTER

1. Lay the set sideways on a soft cloth. Lay the set either on its left or right side, but not with the screen downwards.
2. Remove 4 screws Ⓗ.
3. Take out the CASTER.



(2) EXTERNAL COMPONENTS (REAR)

■ BACK BOARD

1. Remove 1 screws Ⓐ.
2. Loosen 6 screws Ⓑ.
3. Slightly raise and take out the BACK BOARD.

■ REAR COVER

1. Remove 8 screws Ⓒ.
   Support the bottom of the RAER COVER to prevent falling.
2. Slightly raise and take out the REAR COVER.

※ NOTE :

- Because of the large size, at least two persons are recommended for removal and reassembly.

■ HV DIVIDER

1. Take out the BACK BOARD.
2. Remove 1 upper screws Ⓓ.
3. Loosen 1 lower screws Ⓔ.
4. Take out the HV DIVIDER.

* Wires of the HV transformer (FBT) and CRT of each PROJECTION UNIT can be removed by turning the connector portions.

※ NOTE :

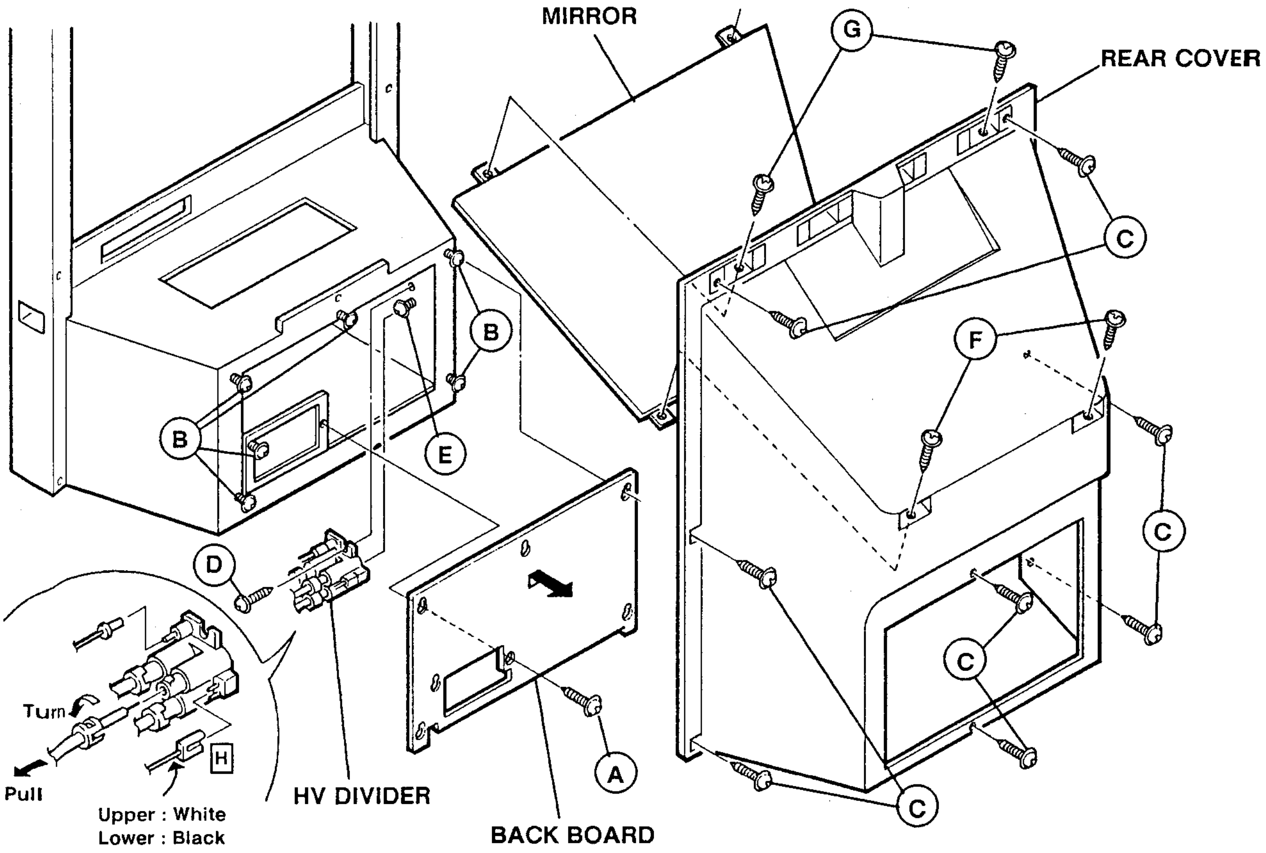
- When replacing the HV DIVIDER, use care to correctly engage the H connector (2 pins) .
  upper : white wire, lower : black wire

■ MIRROR

1. Take out the SCREEN ASS'Y.
2. Remove 2 lower screws Ⓕ.
3. Remove 2 upper screws Ⓖ.
4. Take out the mirror holder. Slightly raise and take out the MIRROR.

※ NOTE :

- The MIRROR is front-coated. Do not touch the front of the MIRROR.
- At least 2 persons are recommended for removing and reassembly.



(3) PWB ASS'Y RELATED

■ MAIN CHASSIS

1. Take out the BACK BOARD.
2. Remove 2 screws Ⓐ.
3. Remove 7 wire clamps Ⓑ.
4. Pull the MAIN CHASSIS (PWB ASS'Ys : SIGNAL, POWER, DEF. etc.) outward to remove.
5. When conducting powered ckeck, position the front side downward and stand AV TERMINAL PWB ASS'Y vertically in contact with the cabinet.

* The standing PWB ASS'Ys can be installed and taken out by engaging and disengaging the connectors.

■ AV TERMINAL BOARD

1. Take out the BACK BOARD.
2. Remove 3 screws Ⓒ.
3. Disengage 2 hooks Ⓓ and 1 hook Ⓔ.
4. Pull forward and take out the AV TERMINAL BOARD.

※ NOTE :

- During powered check while the RF SPLITTER is mounted to the AV TERMINAL PWB ASS'Y, use care that other PWB ASS'Ys are not contacted.

■ RF SPLITTER

1. Take out the BACK BOARD.
2. Remove 2 screws Ⓕ.
3. Disconnect the coaxial cables to the E. tuners and remove the RF SPLITTER.

■ SHADING BRACKET

1. Take out the BACK BOARD.
2. Remove 2 screws Ⓖ.
3. Take out the SHADING BRACKET.

■ REMO-CON PWB ASS'Y

1. Take out the SCREEN ASS'Y.
2. Remove 1 screw Ⓗ.
3. Take out the REMO-CON PWB ASS'Y.

■ PROJECTION UNIT

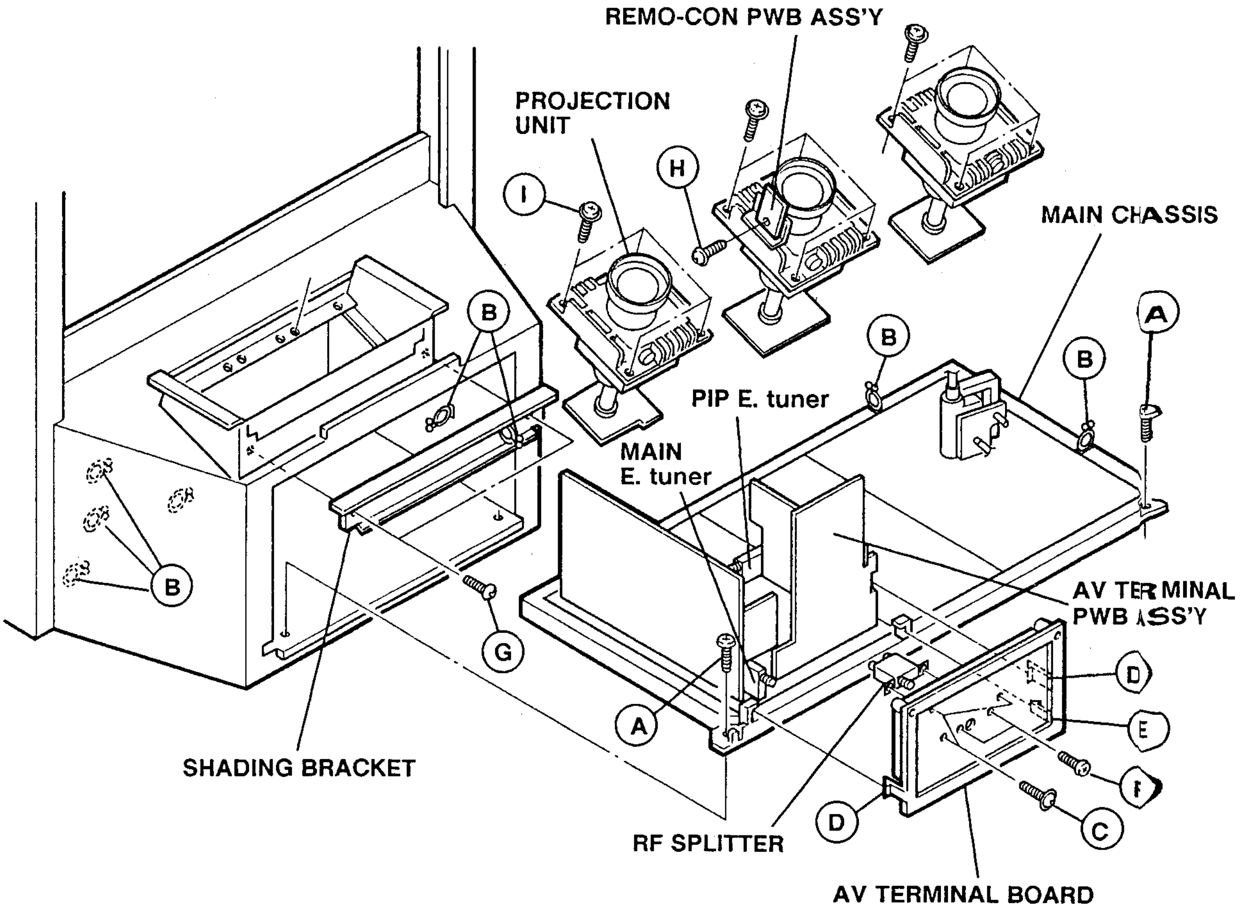
1. Take out the SCREEN ASS'Y.
2. Remove 4 screws Ⓘ.
3. Take out the PROJECTION UNIT.

※ **Note** :

- Refer to "2. PROJECTION UNIT REPLACEMENT" on page 1-6 when taking out and replacing the PROJECTION UNITS.

※ WIRE CLAMPS

- When wire clamps are removed during work, use care to restore them precisely to their original positions. Performance can be affected if these are not returned to the original positions.



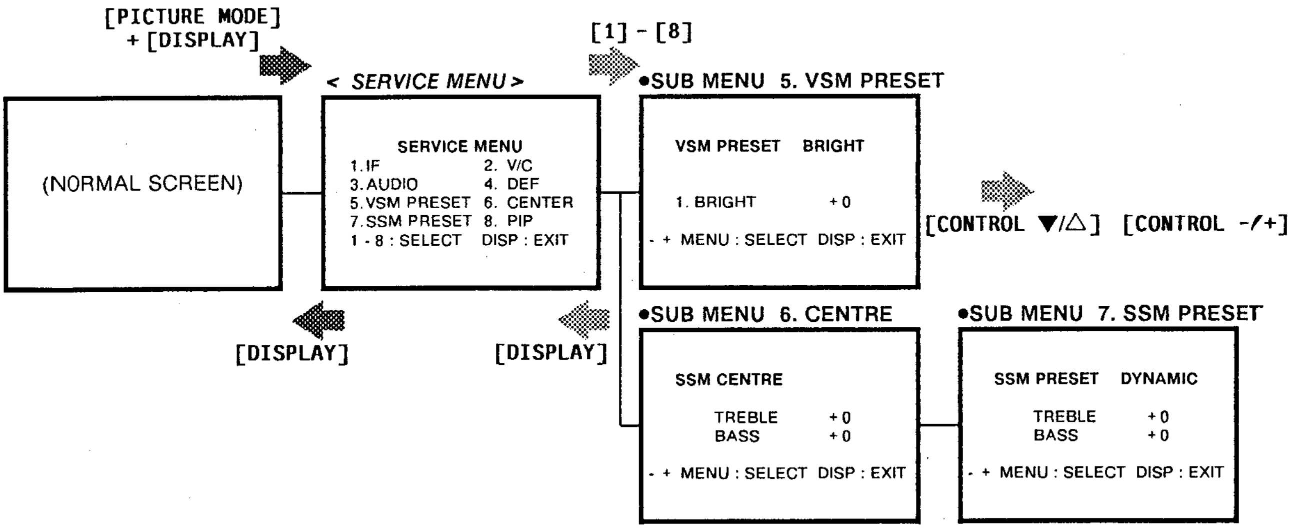
4. PICTURE MODE / THEATRE STATUS / SOUND MODE STANDARD VALUES SETTINGS

- The standard values for the PICTURE MODE, THEATRE STATUS and SOUND MODE are fixed and cannot be changed by the user. If required, change these settings as follows.
- If the memory IC (IC1703) is replaced, be sure to return the standard values settings.

Setting	Item	Remarks
PICTURE MODE STANDARD VALUES	5. VSM PRESET	BRIGHT, STANDARD and SOFT settings
THEATRE STATUS STANDARD VALUES	5. VSM PRESET	THEATRE STATUS setting
SOUND MODE STANDARD VALUES	6. CENTRE	BASS and TREBLE center values
	7. SSM PRESET	DYNAMIC, STANDARD and LIGHT settings

■ SETTING PROCEDURE

1. Simultaneously press the remote control unit [PICTURE MODE] and [DISPLAY] keys to produce the service mode.
2. Select "5. VSM PRESET" press with the [5] key.
3. Select the picture mode with the [PICTURE MODE] or [THEATRE STATUS] key.
4. Select the adjustment items with the [CONTROL ▼/△] keys.
5. Set the data (standard values) with the [CONTROL -/+] keys.
6. After setting, press the [DISPLAY] key to return to the SERVICE MENU screen.
7. In the same manner, set the items of "6. CENTRE" and "7. SSM PRESET" to the values indicated in the tables.
8. When all settings are complete, press the [DISPLAY] key to extinguish the SERVICE MENU screen and release the service mode.


[PICTURE MODE]
+ [DISPLAY]
< SERVICE MENU >
[1] - [8]
•SUB MENU 5. VSM PRESET
(NORMAL SCREEN)
SERVICE MENU
1.IF 2. V/C
3.AUDIO 4. DEF
5.VSM PRESET 6. CENTER
7.SSM PRESET 8. PIP
1 - 8 : SELECT DISP : EXIT
VSM PRESET BRIGHT
1. BRIGHT +0
- + MENU : SELECT DISP : EXIT
[CONTROL ▼/△] [CONTROL -/+]
[DISPLAY]
[DISPLAY]
•SUB MENU 6. CENTRE
•SUB MENU 7. SSM PRESET
SSM CENTRE
TREBLE +0
BASS +0
- + MENU : SELECT DISP : EXIT
SSM PRESET DYNAMIC
TREBLE +0
BASS +0
- + MENU : SELECT DISP : EXIT

■ PICTURE MODE and THEATRE STATUS setting item : "5. VSM PRESET"

No.	Setting item	BRIGHT	STANDARD	SOFT	THEATRE
1	BRIGHT	0	0	0	0
2	CONT	+15	0	-5	-10
3	COLOUR	0	0	0	-3
4	SHARP	0	0	-3	-5
5	TINT	0	0	0	+2
6	R DRIVE	——	0	——	+3
7	G DRIVE	——	0	——	0
8	B DRIVE	——	0	——	-8

* "5. TINT" is displayed and effective only during NTSC input.

* "6. R DRIVE", "7. G DRIVE" and "8. B DRIVE" are indicated only during STABDARD and THEATRE.

■ SOUND MODE setting item : "6. CENTRE"

No.	Setting item	Setting value
1	TREBLE	0
2	BASS	0

■ SOUND MODE setting item : "7. SSM PRESET"

No.	Setting item	DYNAMIC	STANDARD	LIGHT
1	TREBLE	+4	0	+0
2	BASS	+3	0	-8

5. MEMORY IC REPLACEMENT

In event the non-volatic memory IC (IC1703) needs to be replaced, the data must be reentered. In particular, the IC contains video and deflection system data and a normal picture will not be obtained unless these are entered in the replacement IC. If an IC completely void of data is installed, the set can be damaged when power is supplied. Therefore, make sure to replace the IC with **AT24C08-61PRO** which contains the data (initial values) .

■ DATA CONTENTS

- **ADJUSTMENT DATA SETTINGS (VIDEO, DEFLECTION & SOUND SYSTEMS)**

  The SERVICE MENU displays the adjustment values for each items.

  In order to avoid risk of damage to the set, be sure to replace the IC with one containing the data (initial values) .

  * IC replacement symptoms :

  if data are completely absent, a normal picture and sound cannot be obtained when power is supplied.

- **VSM / SSM PRESET SETTINGS**

  Standard setting values of picture and sound for each items for the PICTURE MODE, THEATRE STATUS and SOUND MODE.

  * Data not enter after replacing IC :

  Picture and sound obtained, but in every selected mode, the picture and sound status is the same.

- **LAST MEMORY SETTING**

  The last memory stores the user settings for the items indicated in the table.

  * IC replacement symptoms :

  Picture and sound obtained, but remote controller key channels are not set.

■ REPLACEMENT PROCEDURE

1. Before replacing the IC, receive a broadcast and to the extent possible, make a note of the setting value for each item indicated in the table.
2. Produce the service mode and to the extent possible, make a note of the adjustment values of all adjustment items (Refer page 1-16) .

   * Where the on screen indications cannot be read due to sync distruption or other cause, select the input mode for a external video input where a signal is not present.
3. Switch off the power and disconnect the power cord from AC.
4. Replace the memory IC (IC1703) .
5. Connect the power cord to AC and switch on the power.
6. Use the remote controller to set the values noted in step 1.
7. Display the SERVICE MENU screen and produce the service mode.
8. Set the adjustment values noted in step 2 in the sequence indicated in the table.

   Where adjustment values could not be noted in step 2, set to the standard adjustment values (Refer page 1-16) in the sequence indicated in the table. Afterwards, perform fine adjustment as required.

■ LAST MEMORY SETTING ITEMS

Setting items	Factory settings
CHANNEL PRESET	———
CHANNEL SKIP (EDIT)	———
COLOUR SYTEM	PAL
SOUND SYSTEM	B/G
PICTURE MODE	BRIGHT
THEATRE STATUS	OFF
PICTURE ADJUST (×5)	※
VNR	OFF
SOUND MODE	DYNAMIC
SOUND ADJUST (×2)	※
BALANCE	CENTER
SPEAKER MODE	ON
HEADPHONE SELECT	MAIN / MAIN
MULTI-SOUND mode	STEREO / MAIN
SURROND mode	OFF
HEADPHONE SURROUND mode	OFF
PRO LOGIC 3D-PHONE	CENTRE
DOLBY PRO LOGIC	MAX / NORMAL / L-R
PIP CHANNEL	———
PIP SOURCE	TV
PIP POSITION	UPPER-LEFT
PIP COLOUR SYSTEM	PAL
PIP SOUND SYSTEM	B/G · I · D/K
PIP HEADPHONE SELECT	MAIN / PIP
PIP HEADPHONE VOLUME	———
LANGUAGE	———
AUTO SHUTOFF	OFF
CONVERGENCE	———

※ : Refer to the table for "4. PICTURE MODE / THEATRE STATUS / SOUND MODE STANDARD VALUE SETTINGS"

* "Factory settings" are ultimately for reference. Unless they cause a problem, the user settings have priority.

■ ADJUSTMENT VALUE SETTING ITEMS

Setting sequence	Adjustment item	Item number
1	**1. IF**	2 Items
2	**3. AUDIO**	2 Items
3	**2. V/C**	16 Items
4	**4. DEF**	15 Items
5	**8. PIP**	6 Items
	Total	41 Items

6. REPLACEMENT OF CHIP COMPONENT

■ CAUTIONS

1) Avoid heating for more than 3 seconds.
2) Do not rub the electrodes and the resist parts of the pattern.
3) When removing a chip part, melt the solder adequately.
4) Do not reuse a chip part after removing it.

■ SOLDERING IRON

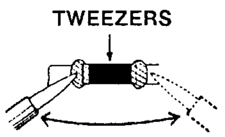
1) Use a high insulation soldering iron with a thin pointed end of it.
2) A 30W soldering iron is recommended for easily removing parts.

■ REPLACEMENT STEPS

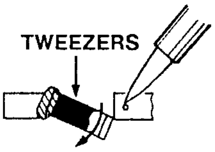
(1) How to remove Chip parts

• Resistors, capacitors, etc

1) As shown in the figure, push the part with tweezers and alter-nately melt the solder at each end.

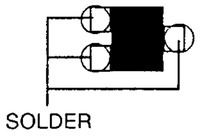


2) Shift with tweezers and remove the chip part.

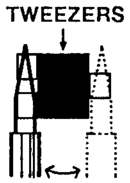


• Transistors, diodes, variable resistors, etc

1) Apply extra solder to each lead.



2) As shown in the figure, push the part with tweezers and alter-nately melt the solder at each lead. Shift and remove the chip part.

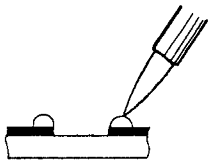


Note : After removing the part, remove remaining solder from the pattern.

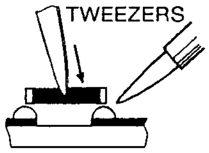
(2) How to install Chip parts

• Resistors, capacitors, etc

1) Apply solder to the pattern as indicated in the figure.



2) Grasp the chip part with twee-zers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

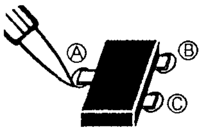


• Transistors, diodes, variable resistors, etc

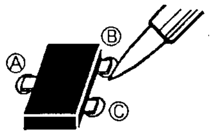
1) Apply solder to the pattern as indicated in the figure.

2) Grasp the chip part with tweezers and place it on the solder.

3) First solder lead Ⓐ as indi-cated in the figure.



4) Then solder leads Ⓑ and Ⓒ.



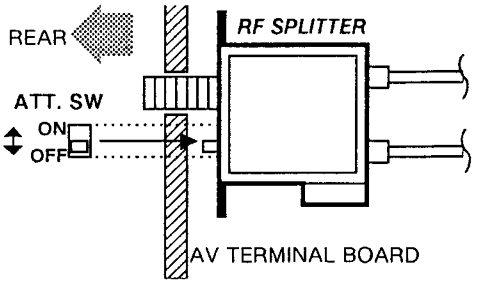
7. RF SPLITTER ANTENNA OUTPUT SWITCH

An internal attenuator ON / OFF switch is provided for the RF splitter of this model (Factory setting is OFF) .

When striped pattern or other interference appears in the picture from the antenna (aerial) input, set the attenuator switch to ON to reduce the antenna output.

Use a thin type tool to change the switch setting.

* **The above interference can occur in arers with strong electromagnetic fields.**



SERVICE ADJUSTMENT

1. PRIOR TO STARTING ADJUSTMENTS

1. Many adjustments of this model are performed using the remote control unit, while other are performed in the conventional manner using components of the PWB ASS'Y and other parts.
   * "6. ADJUSTING STEP" indicated in paren-theses are performed using the remote control unit.
   The adjustment procedure for this model is arranged in the manner of a flowchart.
2. When adjusting with the remote control unit, be sure to first check if the settings are according to the "STANDARD ADJUSTMENT VALUES (INITIAL SETTING VALUES) " on page 1-16 and 17. After completing each adjustment, be sure to press the [MENU] key to store the adjustment value in memory.
3. Refer to the Operating instructions regarding the remote control unit operation.
4. Allow ample time (at least 30minutes) for the set and test equipment to warm up.
5. Check that AC power supply is properly supplied.
6. Refer to the "STANDARD CIRCUIT DIAGRAM" regarding adjustment parts locations.
7. Use care not to disturb variable resistors and other adjustment parts not specifically mentioned in the "ADJUSTING STEP".
8. Unless otherwise mentioned in the adjustment procedure, use the remote control unit and mainframe switches to preset the following functions as indicated.
   - PICTURE MODE : STANDARD
   - PICTURE ADJUST : All center (00)
   - VNR : OFF
   - PIP : OFF
   - SOUND MODE : STANDARD
   - SOUND ADJUST : All center (00)
   - SURROUND : OFF
   - SPEAKER MODE : ON
   - HEADPHONE SELECT : SPEAKER = MAIN (ON), HEADPHONE = MAIN
   - AUTO SHUT OFF : OFF

2. TEST EQUIPMENT AND FIXTURES

1) **DC voltmeter (Digital DC voltmeter)**
2) **Oscilloscope**
   - Dual trace
   - Delayed sweep function
   - 10:1 probes
3) **Frequency counter**
4) **Test pattern generator (Signal generator) [PAL / SECAM / NTSC3.58]**
   Pattern : Full color bar, Crosshatch, Dot, All-white
   (* If available : Split color bar, Mono-scope [Resolution], Pedestal)
5) **Function generator**
6) **Remote control unit [RM-C995]**
7) **Short jumper**
8) **Insulated adjusting driver** (flat blade - small)

3. ADJUSTMENTS WITH REMOTE CONTROL UNIT

These adjustments are performed by entering the SERVICE mode and using the remote control unit. The table indicates the adjustments according to content..

Adjustment screen items	Adjustment circuit	Contents (Adjustment items)	
1. IF	IF (AFT, AGC) circuit	1. VCO 2. PIP AFC	3. DELAY POINT 4. PIP DELAY POINT
2. V/C	VIDEO (Y) / CHROMA circuit	1. CUTOFF 2. R DRIVE 3. G DRIVE 4. B DRIVE 5. BRIGHT 6. CONT 7. COLOUR 8. TINT	9. DELAY TIME 10. PEAKING 11. SHARP 12. 3D Y/C 13. PLL 14. NR 15. V. DIV 16. BLUE BACK
3. AUDIO **[Adjustment not required]**	MULTI-SOUND DEMOD. circuit	1. CONC LIMIT 2. A2 ID THR	3. SOUND SYSTEM
4. DEF	DEFLECTION OSCILLATION circuit	1. V-SHIFT 2. V-SLOPE 3. V-SIZE 4. V-S. CR 5. H-CENT 6. H-SIZE 7. EW-PIN 8. EW-COR	9. TRAPEZ 10. HVU 11. HVD 12. HCO 13. R OFF 14. G OFF 15. B OFF
8. PIP	PIP CONTROL circuit	1. PIP RIGHT-H 2. PIP UP-V 3. PIP LEFT-H	4. PIP DOWN-V 5. PIP R-Y 6. PIP B-Y

※ Refer to page 1-10 "PICTURE MODE, THEATRE STATUS AND SOUND MODE STANDARD VALUE SETTINGS" regarding "5. VSM PRESET" , "6. CENTRE" and "7. SSM PRESET".

■SERVICE MODE ENTRY

1. Simultaneously press the remote control unit [DISPLAY] and [PICTURE MODE] keys.
2. The service mode is entered when the "SERVICE MENU" screen is displayed.

■SERVICE MODE EXIT

METHOD 1 :

Press the [DISPLAY] key key to extingush the SERVICE MENU screen and return normal status.

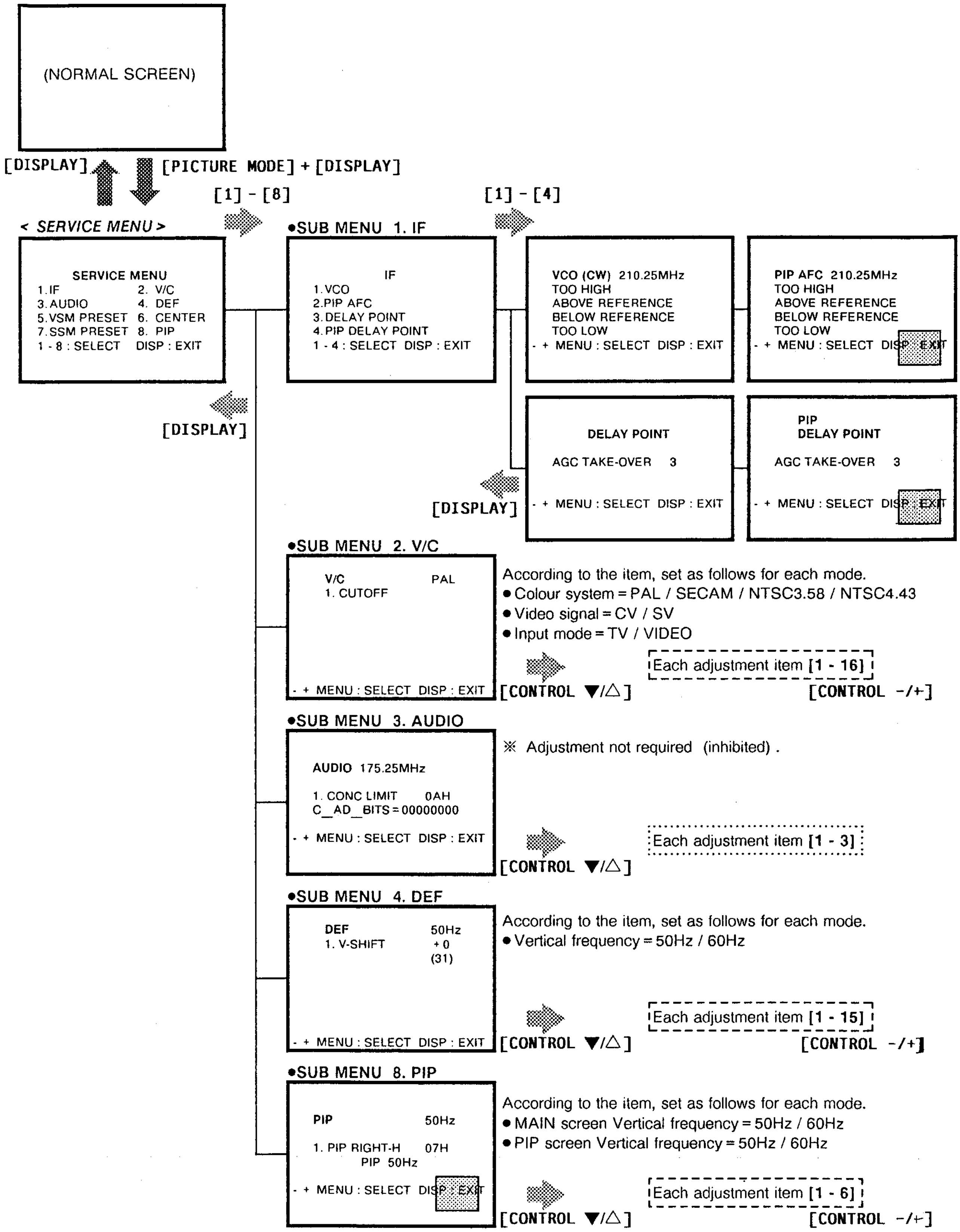
METHOD 2 :

Switch off the power by pressing the [POWER] key of the remote control unit or the [MAIN POWER] button of the mainframe.

■BASIC ADJUSTMENT PROCEDURE

1. Set the service mode.
2. According to the adjustment contents, select the appropriate item (SUB MENU screen) with a key from [1] to [8].
3. Select the items for adjustment at the respective SUB MENU screens.
   ① **"1. IF"** : Press the key from [1] to [4] to select the adjustment items.
   ② **"2. V/C", "3. AUDIO", "4. DEF", "8. PIP"** : Select the adjustment items. with the [CONTROL ▼/△] keys.
4. Select the adjustment item with the [CONTROL ▼/△] keys.
5. Change the data (adjustment value) with the [CONTROL -/+] keys.
6. After adjusting, press the [MENU] key to store the data (adjustment value) .
7. To adjust another service item (SUB MENU screen) , first press the [DISPLAY] key. At the SERVICE MENU screen, again select the required item (SUB MENU screen) .
8. When adjustments are completed, press the [DISPLAY] key to extinguish the SERVICE MENU screen and exit service mode.

■SERVICE MODE OPERATION CHART


(NORMAL SCREEN)
[DISPLAY]
[PICTURE MODE] + [DISPLAY]
[1] - [8]
[1] - [4]
< SERVICE MENU >
SERVICE MENU
1.IF 2. V/C
3.AUDIO 4. DEF
5.VSM PRESET 6. CENTER
7.SSM PRESET 8. PIP
1 - 8 : SELECT DISP : EXIT
[DISPLAY]
•SUB MENU 1. IF
IF
1.VCO
2.PIP AFC
3.DELAY POINT
4.PIP DELAY POINT
1 - 4 : SELECT DISP : EXIT
VCO (CW) 210.25MHz
TOO HIGH
ABOVE REFERENCE
BELOW REFERENCE
TOO LOW
- + MENU : SELECT DISP : EXIT
PIP AFC 210.25MHz
TOO HIGH
ABOVE REFERENCE
BELOW REFERENCE
TOO LOW
- + MENU : SELECT DISP : EXIT
DELAY POINT
AGC TAKE-OVER 3
- + MENU : SELECT DISP : EXIT
PIP
DELAY POINT
AGC TAKE-OVER 3
- + MENU : SELECT DISP : EXIT
[DISPLAY]
•SUB MENU 2. V/C
V/C PAL
1. CUTOFF
- + MENU : SELECT DISP : EXIT
[CONTROL ▼/△]
Each adjustment item [1 - 16]
[CONTROL -/+]
•SUB MENU 3. AUDIO
AUDIO 175.25MHz
1. CONC LIMIT 0AH
C_AD_BITS=00000000
- + MENU : SELECT DISP : EXIT
[CONTROL ▼/△]
Each adjustment item [1 - 3]
•SUB MENU 4. DEF
DEF 50Hz
1. V-SHIFT +0
(31)
- + MENU : SELECT DISP : EXIT
[CONTROL ▼/△]
Each adjustment item [1 - 15]
[CONTROL -/+]
•SUB MENU 8. PIP
PIP 50Hz
1. PIP RIGHT-H 07H
PIP 50Hz
- + MENU : SELECT DISP : EXIT
[CONTROL ▼/△]
Each adjustment item [1 - 6]
[CONTROL -/+]

According to the item, set as follows for each mode.
- Colour system = PAL / SECAM / NTSC3.58 / NTSC4.43
- Video signal = CV / SV
- Input mode = TV / VIDEO

※ Adjustment not required (inhibited) .

According to the item, set as follows for each mode.
- Vertical frequency = 50Hz / 60Hz

According to the item, set as follows for each mode.
- MAIN screen Vertical frequency = 50Hz / 60Hz
- PIP screen Vertical frequency = 50Hz / 60Hz

4. STANDARD ADJUSTMENT VALUES (INITIAL SETTING VALUES)

- When adjusting with the remote control unit, refer to the "STANDARD ADJUSTMENT VALUES" table and fine adjust while observing the picture. The standard adjustment values are indicated for reference and are not absolutely required values. Refer to the adjustment procedure on page 1-19.
- If the memory IC (IC1703) is replaced, be sure to set the standard adjustment values.
- Regarding items indicated "Fixed" in the standard adjustment value column, use care not to distuab the values (data) expect for settings when replacing the memory IC.

● 1. IF

"1. VCO" and "2. PIP AFC" cannot be adjusted with the remote control unit. [* : Only display on the screen]

Item No.	Adjustment item	Variable range	Standard
1	VCO		*
2	PIP AFC		*
3	DELAY POINT	0 - 63	10 Fixed
4	PIP DELAY POINT	0 - 63	10 Fixed

● 2. V/C

Accoding to the item, setting is required for each colour system (PAL / SEACAM / NTSC3.58 / NTSC4.43) , video signal (CV / SV) and input mode (TV / VIDEO) .

Item No.	Adjustment item	Variable range	Standard			
1	CUTOFF	ON / OFF	OFF			
2	R DRIVE	-16 - +15	-10			
3	G DRIVE	-16 - +15	+0			
4	B DRIVE	-16 - +15	-5			

Item No.	Adjustment item	Variable range	Standard			
5	BRIGHT	-16 - +15	+0			
6	CONT	-16 - +15	+0			

Item No.	Adjustment item	Variable range	PAL	SECAM	NTSC3.58	NTSC4.43
7	COLOUR	-16 - +15	+3	+3	+3	+3
8	TINT TV	-16 - +15	——	——	+0	+0
	VIDEO	-16 - +15	——	——	+0	+0
9	DELAY TIME TV	00H - 15H	00H Fixed	00H Fixed	00H Fixed	00H Fixed
	VIDEO CV	00H - 15H	00H Fixed	00H Fixed	00H Fixed	00H Fixed
	VIDEO SV	00H - 15H	00H Fixed	00H Fixed	00H Fixed	00H Fixed

Item No.	Adjustment item	Variable range	Standard			
10	PEAKING	-8 - +7	-4 Fixed			

Item No.	Adjustment item	Variable range	PAL	SECAM	NTSC3.58	NTSC4.43
11	SHARP TV	-99 - +99	-18 Fixed	-18 Fixed	0 Fixed	-18 Fixed
	VIDEO	-99 - +99	-18 Fixed	-18 Fixed	0 Fixed	-18 Fixed

Item No.	Adjustment item	Variable range	Standard			
12	3D Y/C	ON / OFF	ON Fixed			
13	PLL	ON / OFF	OFF Fixed			
14	NR	ON / OFF	OFF Fixed			

Item No.	Adjustment item	Variable range	TV	VIDEO		
15	V. DIV AUTO	0 - 1	0 Fixed	0 Fixed		
	COMPULSION	0 - 1	0 Fixed	1 Fixed		

Item No.	Adjustment item	Variable range	Standard			
16	BLUE CHECK	ON / OFF	ON Fixed			

3. AUDIO [Adjustment not required]

Adjustment of these items is not required. Do not change the values indicated inthe table.

Item No.	Adjustment item	Variable range	Standard
1	CONC LIMIT	00H - FFH	0A Fixed
2	A2 ID THR	00H - FFH	0E Fixed
3	SOUND SYSTEM		*

4. DEF

Accoding to the item, setting is required for each vertical frequency (50Hz / 60Hz) .

Item No.	Adjustment item	Variable range	50Hz	60Hz
1	V-SHIFT	-32 - +31	+0 Fixed	+0 Fixed
2	V-SLOPE	-32 - +31	+0 Fixed	-2 Fixed
3	V-SIZE	-32 - +31	+0	-2
4	V-S. CR	-32 - +31	+0 Fixed	+0 Fixed
5	H-SCENT	-32 - +31	-4	+9
6	H-SIZE	-32 - +31	+6	+0
7	EW-PIN	-32 - +31	-6	+0
8	EW-COR	-32 - +31	-6	+0
9	TRAPEZ	-32 - +31	-9	-3

Item No.	Adjustment item	Variable range	Standard	
10	HVU	ON / OFF	OFF Fixed	
11	HVD	ON / OFF	OFF Fixed	
12	HCO	ON / OFF	OFF Fixed	
13	R OFF	ON / OFF	OFF	
14	G OFF	ON / OFF	OFF	
15	B OFF	ON / OFF	OFF	

8. PIP

Accoding to the item, setting is required for each vertical frequency of MAIN and PIP screens (50Hz / 60Hz) .

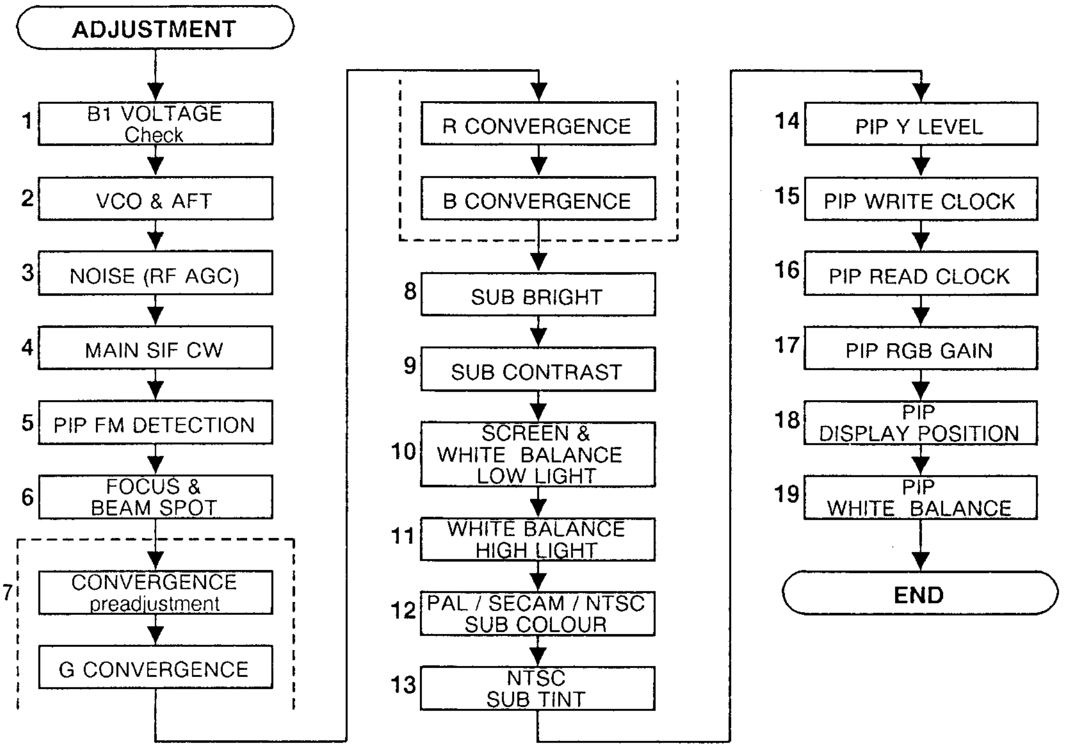
Item No.	Adjustment item	Variable range	MAIN = 50Hz PIP = 50HZ	MAIN = 60Hz PIP = 50Hz	MAIN = 50Hz PIP = 60Hz	MAIN = 60Hz PIP = 60Hz
1	PIP RIGHT-H	00H - 0FH	6	8	5	5
2	PIP UP-V	00H - 0FH	3	2	2	2
3	PIP LEFT-H	00H - 0FH	7	4	9	7
4	PIP DOWN-V	00H - 0FH	2	5	0	2

Item No.	Adjustment item	Variable range	Standard			
5	PIP R-Y	00H - 3FH	20			
6	PIP B-Y	00H - 3FH	20			

5. ADJUSTMENT FLOWCHARTS

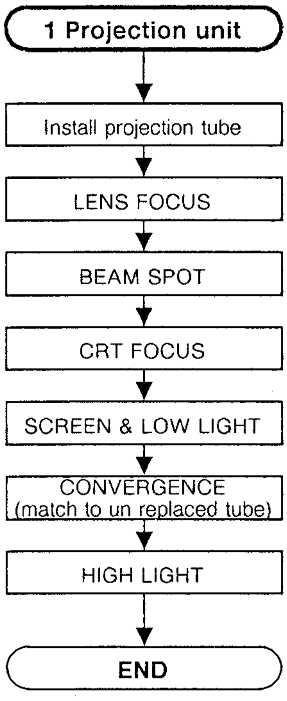
■OVERALL ADJUSTMENT PROCEDURE

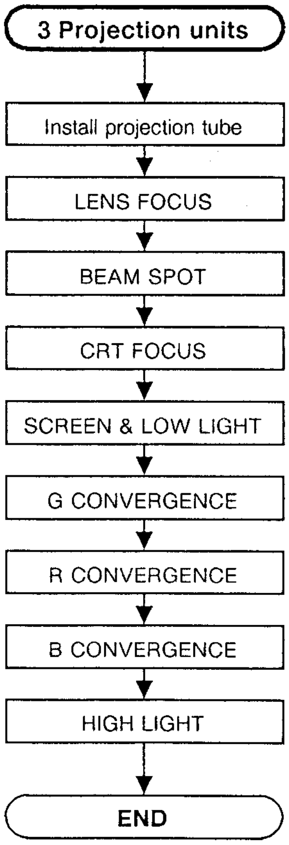
Perform each adjustment according to the flowchart.
If performing an adjustment out of sequence, be sure to check the adjustments are correct for the previous steps.

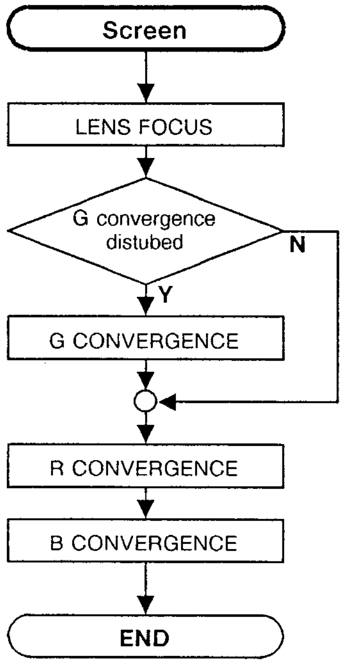

ADJUSTMENT
1 B1 VOLTAGE Check
2 VCO & AFT
3 NOISE (RF AGC)
4 MAIN SIF CW
5 PIP FM DETECTION
6 FOCUS & BEAM SPOT
7 CONVERGENCE preadjustment
G CONVERGENCE
R CONVERGENCE
B CONVERGENCE
8 SUB BRIGHT
9 SUB CONTRAST
10 SCREEN & WHITE BALANCE LOW LIGHT
11 WHITE BALANCE HIGH LIGHT
12 PAL / SECAM / NTSC SUB COLOUR
13 NTSC SUB TINT
14 PIP Y LEVEL
15 PIP WRITE CLOCK
16 PIP READ CLOCK
17 PIP RGB GAIN
18 PIP DISPLAY POSITION
19 PIP WHITE BALANCE
END

■WHEN REPLACING SCREEN AND PROJECTION TUBES

※ Contains only the main adjustments. Also confirm other adjustments as required.


1 Projection unit
Install projection tube
LENS FOCUS
BEAM SPOT
CRT FOCUS
SCREEN & LOW LIGHT
CONVERGENCE (match to un replaced tube)
HIGH LIGHT
END


3 Projection units
Install projection tube
LENS FOCUS
BEAM SPOT
CRT FOCUS
SCREEN & LOW LIGHT
G CONVERGENCE
R CONVERGENCE
B CONVERGENCE
HIGH LIGHT
END

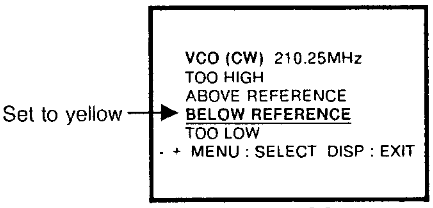

Screen
LENS FOCUS
G convergence distubed
N
Y
G CONVERGENCE
R CONVERGENCE
B CONVERGENCE
END

6. ADJUSTING STEP

- Be sure to perform adjustments in the indicated sequence.
- "Item" indicated by ◆ ◆, as well as "Test point" and "Adjustment part" indicated by bracket [ ] refer to the respective PWB ASS'Ys for performing the adjustments.
- "Description" items indicated in parenthese < > are conducted using the remote controller.

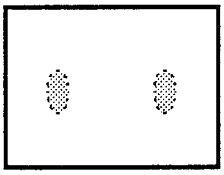
Item	Measuring instrument	Test point	Adjustment part	Description
1. B1 VOLTAGE check ◆DEF◆	Pattern generator DC voltmeter	TP-B1		1. Supply a all black signal input. 2. Connect a DC voltmeter to TP-B1. 3. Confirm voltage is DC 130V ± 1V. ※ If voltage is incorrect, check the AC power supply voltage or circuit.
2. VCO & AFT ◆SIGNAL◆ < 1. IF >	Frequency counter	Screen IF-1 : VCO IF-2 : PIP AFC PIF2 connector pin [1]	VCO1 transformer (T021) VCO2 transformer (T603) PIF2 connector AFT2 transformer (T602)	※ Preform the following adjustments only if the picture is abnormal after PIF circuit parts or adjustment is incorrect. ■MAIN PICTURE 1. Receive an ordinary broadcast signal. 2. Set the service mode and select "1. VCO" of the SUB MENU "1. IF" screen. 3. Turn the VCO1 transformer to where the "TOO HIGH" characters are yellow. 4. Slowly turn the VCO1 transformer counter-clockwise and stop where the yellow characters change from "ABOBE REFERENCE" to "BELOW REFERENCE". 5. Exit the service mode. 6. Perform AUTO CHANNEL PRESET and confirm that broadcasts can be normally received. ■PIP PICTURE 1. Do not supply a signal to the aerial input. 2. Short pins [2] and [3] of the PIF connector. 3. Connect a frequency counter to pin [1] of the PIF connector. 4. Adjust the VCO2 transformer to set the oscillation frequency to 38.0MHz. 5. Receive an ordinary broadcast signal. 6. Display "2. PIP AFC" of the "1. IF" SUB MENU screen. 7. Turn the AFT2 transformer to where the "TOO HIGH" characters are yellow. 8. Slowly turn the AFT2 transformer counter-clockwise and stop where the yellow characters change from "ABOBE REFERENCE" to "BELOW REFERENCE". 9. Exit the service mode. 10. Perform AUTO CHANNEL PRESET and confirm that broadcasts can be normally received on the PIP screen.
3. NOISE (RF AGC) ◆SIGNAL◆ < 1. IF >		Screen	IF-3 : DELAY POINT IF-4 : PIP DEALY POINT	■MAIN PICTURE 1. Receive an ordinary broadcast signal. 2. Adjust <IF-3> to where noise disappears from the picture. 3. Press the [MENU] key to store the adjustment value. 4. Check other channels and confirm normal reception. ■PIP PICTURE 1. Receive an ordinary broadcast signal. 2. Adjust <IF-3> to where noise disappears from the picture. 3. Press the [MENU] key to store the adjustment value. 4. Check other channels and confirm normal reception.

Screen diaplay	Display colour change ① → ② → ③ → ④
TOO HIGH	Y → Cy → Cy → Cy
ABOVE REFERENCE	Cy → Y → Cy → Cy
BELOW REFERENCE	Cy → Cy → Y → Cy
TOO LOW	Cy → Cy → Cy → Y



VCO (CW) 210.25MHz
TOO HIGH
ABOVE REFERENCE
BELOW REFERENCE
TOO LOW
- + MENU : SELECT DISP : EXIT

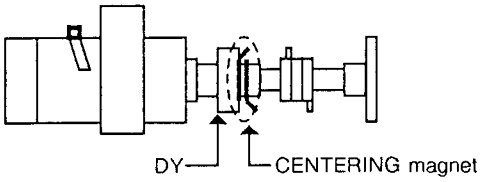
"1. IF" - "1. VCO" screen

Item	Measuring instrument	Test point	Adjustment part	Description
4. MAIN SIF CW ◆AUDIO◆	Frequency counter	SIF connector pin [1]	SIF connector CW transformer (T101)	1. Do not supply a signal to the aerial input. 2. Short pins [2] and [3] of the SIF connector. 3. Connect a frequency counter to pin [1] of the SIF connector. 4. Adjust the CW transformer to set the oscillation frequency to 38.0MHz.
5. PIP FM DETECTION ◆SIGNAL◆	Function generator Oscilloscpe	SIF2 connector pin [3]	SIF2 connector FM DET transformer (T101)	1. Supply a 6.0MHz sinewave input to pin [4] of the SIF2 connector. 2. Connect an oscilloscope to pin [3] of the SIF2 connector. 3. Adjust the FM DET transformer for maximum level within the range where the waveform isnot distorted. 4. Receive an ordinary broadcast and confirm the sound is not distorted.
6. FOCUS & BEAM SPOT ◆Mainframe◆ <4. DEF>	Pattern generator Similar adhesive (Securing adhesive)  CRT FOCUS adjustment positions	Screen	G def. yoke (DY) R def. yoke (DY) B def. yoke (DY) [Projection unit] R / G / B LENS FOCUS screw [Projection unit LEMS ASS'Y] DEF-13 : R OFF DEF-14 : G OFF DEF-15 : B OFF R SCREEN VR G SCREEN VR B SCREEN VR [FOCUS PACK] R FOCUS VR G FOCUS VR B FOCUS VR [FOCUS PACK] 4 pole magnet 2 pole magnet [Projection unit CRT neck]	1. Supply a crosshatch signal input. 2. If the picture tilted, adjust the R, G and B DY. ■LENS FOCUS 3. Set <DEF-14> and <DEF-15> to ON to produce a red signal colour. * Or reduce the SCREEN VRs indicated in the table. 4. Turn the LENS FOCUS screw for optimum focus at the screen center. Check for absence of differences in the peripheral focus. If the peripheral focus is poor, slightly shift the center focus to obtain overall balanced focus. 5. In the same manner, produce green and blue signal colours and adjust their respective focus. ■BEAM SPOT 6. Supply a dot signal input. 7. Set <DEF-14> and <DEF-15> to ON to produce a red signal colour. * Or reduce the SCREEN VRs indicated in the table. 8. Turn the R FOCUS VR to set the dot diameter to about 30mm. 9. Turn the 4 pole magnet of the projection unit CRT neck and adjust to where the dots at the screen center are nearly circular. 10. Return the R FOCUS VR to its original position. 11. Turn the 2 pole magnet of the CRT neck to minimize expansion of the dots. 12. Supply a crosshatch signal input. 13. Adjust the overall screen focus. 14. In the same manner, adjust for the green and blue signal colours. 15. Secure the 4 and 2 pole magnets with similar adhesive. ■CRT FOCUS 16. Supply a crosshatch signal input. 17. Set <DEF-14> and <DEF-15> to ON to produce a red signal colour. * Or reduce the SCREEN VRs indicated in the table. 18. Adjust the R FOCUS VR for optimum focus at the position indicated in the figure. 19. In the same manner, adjust for the green and blue signal colours. 20. After adjustment, return the SCREEN VRs to their original positions.

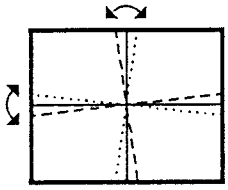
Screen	"4. DEF" ON	SCREEN VR
R	14 + 15	G + B
G	13 + 15	R + B
B	13 + 14	R + G

Item	Measuring instrument	Test point	Adjustment part	Description
7. DEFLECTION & CONVERGENCE				
7-1 DEFLECTION & CONVERGENCE Preadjustment ◆CONVER.◆ < 4. DEF >	Pattern generator	Screen	G def. yoke (DY) R def. yoke (DY) B def. yoke (DY) [Projection unit] DEF-13 : R OFF DEF-15 : B OFF R SCREEN VR B SCREEN VR [FOCUS PACK] DEF-5 : H-CENT DEF-6 : H-SIZE	• Confirm standard adjustment value settings for "4. DEF". • Confirm correct FOCUS adjustment. • Supply a PAL crosshatch signal input. ■ SCREEN TILT (DEFLECTION YOKE TILT) 1. Check that the G -DY is secured it at the topmost part of the CRT neck. 2. Adjust the G-DY tilt so that the vertical and horizontal lines are respectively vertical and horizontal. Also adjust for optimum focus at the screen center. 3. After adjusting. firmly tighten the G-DY screw at the adjusted position. 4. In the same manner, adjust the tilt of the R and B deflection yokes. 5. After adjusting G, R and B, check for optimum focus at the center of the screen. If adjustment is deviated, repeat the above procedure from step 4 onward. ■H. POSITION (CENTER) & SIZE (coarse) 6. Set <DEF-13> and <DEF-15> to produce a green single colour. * Or reduce the Rand B SCREEN VRs to produce a green single colour. 7. Reduce the horizontal width with <DEF-6> to where both left and right edges of the image are missing. 8. Adjust <DEF-5> to align the horizontal center of the image with the horizontal center of the screen. 9. Adjust <DEF-6> to set the horizontal size to 92.5%. 10. After adjusting, press the [MENU] key to store the adjustmnt values.

[Projection unit]

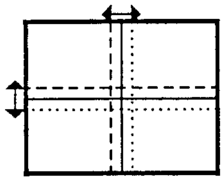


<SCREEN TILT>



Remove H and V tilt.

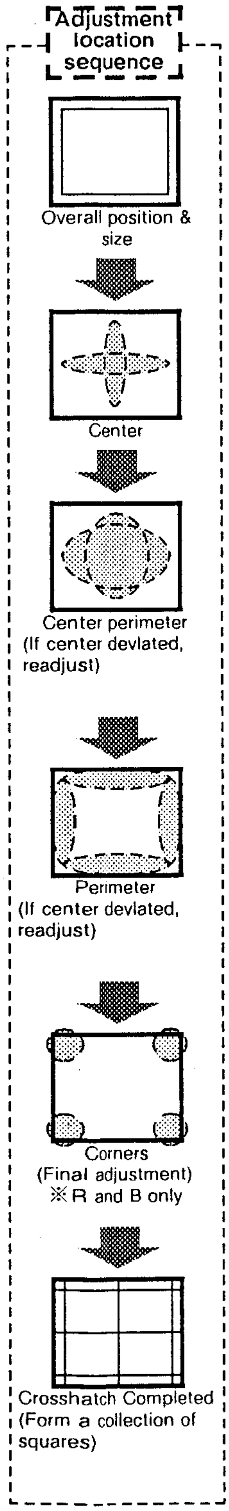
<H. POSITION>

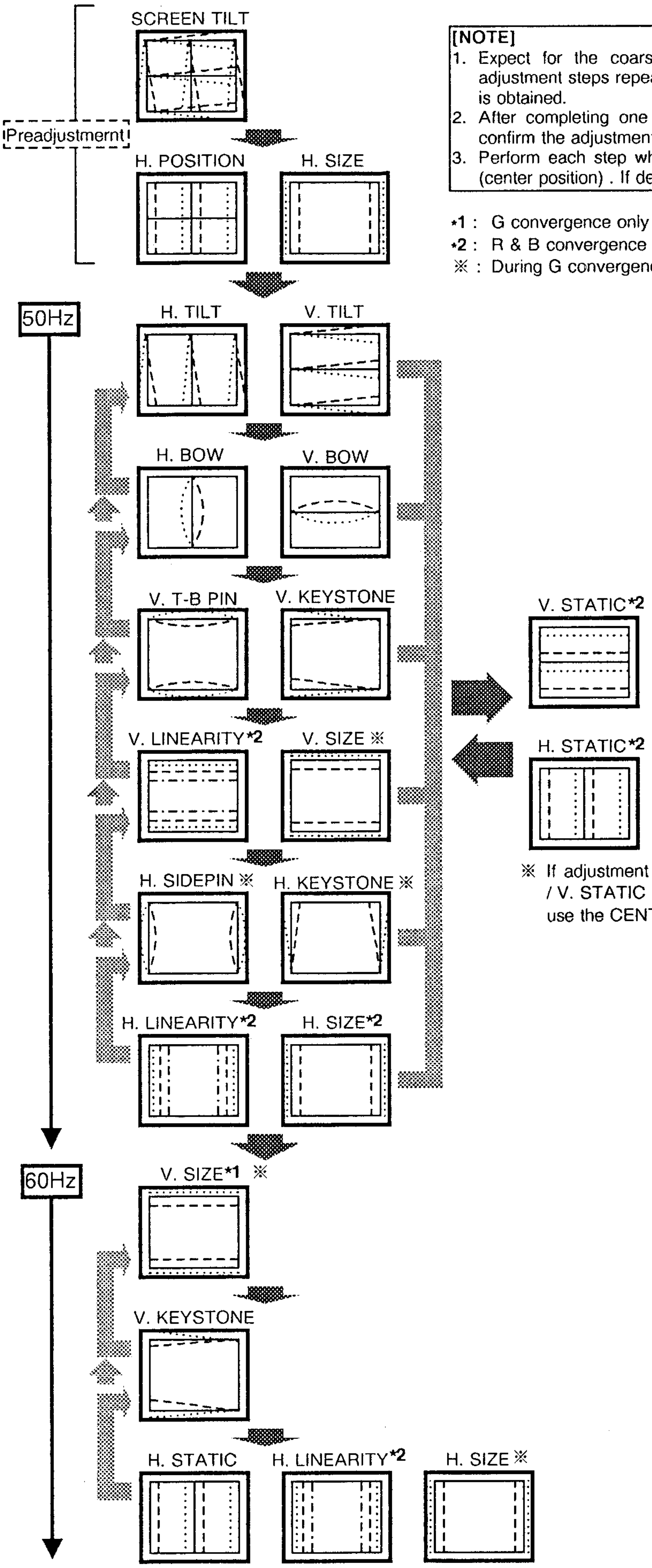


With G as reference, overlap G, R and B lines at center.

Screen	"4. DEF" ON	SCREEN VR
G	13 + 15	R + B

■ DEFLECTION & CONVERGENCE ADJUSTMENT PROCEDURE ■


Adjustment location sequence
Overall position & size
Center
Center perimeter (If center devlated, readjust)
Perimeter (If center devlated, readjust)
Corners (Final adjustment) ※R and B only
Crosshatch Completed (Form a collection of squares)


Preadjustmernt
SCREEN TILT
H. POSITION
H. SIZE
50Hz
H. TILT
V. TILT
H. BOW
V. BOW
V. T-B PIN
V. KEYSTONE
V. LINEARITY*2
V. SIZE ※
H. SIDEPIN ※
H. KEYSTONE ※
H. LINEARITY*2
H. SIZE*2
V. STATIC*2
H. STATIC*2
60Hz
V. SIZE*1 ※
V. KEYSTONE
H. STATIC
H. LINEARITY*2
H. SIZE ※

[NOTE]
1. Expect for the coarse adjustments, perform the adjustment steps repeatedly until precise adjustment is obtained.
2. After completing one adjustment step, be sure to confirm the adjustment of the previous step.
3. Perform each step while checking the H (V) static (center position) . If deviated, correct as required.

*1 : G convergence only
*2 : R & B convergence only
※ : During G convergence, adjust with "4. DEF"

※ If adjustment is difficult, return H. STATIC / V. STATIC VRs to mechanical center and use the CENTERING magnet.

Item	Measuring instrument	Test point	Adjustment part	Description
7-2 **G CONVERGEBCE** **◆CONVER◆** **< 4. DEF >**	**Pattern generator**	**Screen**	**DEF-3 : V-SIZE** **DEF-7 : EW-PIN** **DEF-8 : EW-COR** **DEF-9 : TRAPEZ** **DEF-5 : H-CENT** **DEF-6 : H-SIZE** **G CENTERING magnet [G-DY attatchment]** **※ Others : Refer to figure (page 1-25)**	● Prepare crosshatch signals for both PAL and NTSC. ● Set <DEF-13> and <DEF-15> to ON to produce a green single colour. * Or reduce the R and B SCREEN VRs to produce a green single colour. **■PAL / SECAM (fv = 50Hz)** ● Supply a PAL crosshatch signal input. ① **H. & V. TILT** 1. Adjust the H. KEY VR so that the vertical lines (straight lines) at the center of the screen are vertical. 2. Adjust the V. KEY VR so that the horizontal lines (straight lines) at the screen center are horizontal. ② **H. & V. BOW DISTORTION** 1. Adjust the H. BOW VR to straighten the vertical lines at the center of the screen. 2. Adjust the V. BOW VR to straighten the horizontal lines at the center of the screen. ③ **V. T-B PINCUSHION & KEYSTONE DISTORTION** 1. Adjustment the V. TB-PIN VR to straighten the horizontal lines at both the top and bottom edges of the screen. 2. Adjustment the V. KEYS VR so that the horizontal lines (straight lines) at the top and bottom edges of the screen are horizontal. ④ **V. SIZE** Respectively adjust <DEF-3> and G CENTERING magnet to set the vertical hight (size) to 92.5%. When adjusting the CENTERING magnet, use care not to disturb the horizontal position of the overall screen. ⑤ **H. SIDE PINCUSHION & KEYSTONE DISTORTION** 1. Adjust the H. PIN VR, H. PIN BALANCE VR, <DEF-7> and <DEF-8> so that the vertical lines of the overall screen are straight. In this case, provided the vertical lines are straight, they may be inclined. 2. Adjust the <DEF-9> so that vertical lines at the right side of the screen are vertical. * Although the left side will also change, this is adjusted with reference to the right side. 3. Adjust the H. L-KEYS VR so that vertical lines at the left side of the screen are vertical. **■NTSC (fv = 60Hz)** ● Supply a NTSC crosshatch signal input. ① **V. SIZE** Adjust <DEF-3> to set the vertical hight (size) to 92.5%. ② **V. KEYSTONE DISTORTION** Adjust the V. 60 KEYS VR so thst horizontal (straight) lines at the top and bottom of thescreen are horizontal. ③ **H. SIZE** Respectively adjust <DEF-5> and <DEF-6 > to set the horizontal width (size) to 92.5%.

■G convergence display colour switching item

Adjustment item	"4. DEF" ON	SCREEN VR
G convergence	13 + 15	R + B

■G convergence using VR table

*	Adjustment parts	Symbol	Adjustment items
	H. KEY	R427	H. tilt
	H. BOW	R433	H. bow distortion
	H. PIN	R445	H. sidepin
	H. PIN BALANCE	R435	H. pin balance
	H. L-KEYS	R430	H. keystone distortion
*	H. STATIC	R727	H. static
	V. KEY	R476	V. tilt
	V. BOW	R484	V. bow distortion
	V. TB-PIN	R480	V. T-B pin
*	V. TOP-PIN	R489	V. top pin
	V. KEYS	R478	V. keystone distortion
	V. 60 KEYS	R494	V. keystone distortion
*	V. STATIC	R728	V. static

* : no use

Item	Measuring instrument	Test point	Adjustment part	Description
7-3 R CONVERGEBCE ◆CONVER◆ 7-4 B CONVERGEBCE ◆CONVER◆	Pattern generator	Screen	R CENTERING magnet [R-DY attachment] B CENTERING magnet [B-DY attachment] ※ Others : Refer to figure (page 1-25)	• Set <DEF-15> [<DEF-13>] to ON to cutoff only the blue [red]. * Or reduce the B [R] SCREEN VR to cutoff only the blue [red]. **■PAL / SECAM (fv=50Hz)** • Supply a PAL crosshatch signal input. ① **H. & V. POSITION (CENTERING)** Adjust the R [B] CENTERING magnet to overlap the center (vertical and horizontal lines) of the red [blue] image with the green or cyan [yellow] image. ② **H. & V. TILT** 1. H. KEY VR : Vertical lines at screen center are vertical. 2. V. KEY VR : Horizontal lines at screen center are horizontal. ③ **H. & V. BOW DISTORTION** 1. H. BOW VR : Vertical lines at screen center are straight. 2. V. BOW VR, V. L-BOW VR : Horizontal lines at screen center are straight. * V. L-BOW VR : Left side only ④ **V. T-B PINCUSHION & KEYSTONE DISTORTION** 1. V. T-B PIN VR : Horizontal lines at screen bottom are straight. Although top lines also change, adjust bottom as reference. 2. V. TOP-PIN VR : Horizontal lines at screen top are straight. 3. V. KEYS VR : Horizontal lines at screen bottom are horizontal. Although top lines also change, adjust bottom as reference. 4. V. TOP-KEYS VR : Horizontal lines at screen top are horizontal. ⑤ **V. SIZE** 1. V. TOP-SIZE VR : Horizontal lines overlap green at screen top. 2. V. BOTTOM-SIZE VR : Horizontal lines overlap green at screen bottom. ⑥ **H. SIDE PINCUSHION & KEYSTONE distortion** 1. H. PIN VR, H. PIN BALANCE VR : Vertical lines at both left and right sides of screen are straight. 2. H. KEYS VR : Vertical lines at right side of screen are vertical. Although left side also varies, adjust the right side as reference. 3. H. L-KEYS VR : Vertizal lines at left side of screen are vertical. ⑦ **H. LINEARITY & SIZE** 1. H. LIN VR : Uniform horizontal space between vertical lines near screen center. 2. H. L-LIN VR, H. R-LIN VR : Uniform horizontal space between vertical lines at screen side. * H. L-LIN VR : Left side, H. R-LIN VR : Right side 3. H. SIZE VR : Overlap screen vertical lines on green vertical lines. **■NTSC (fv=60Hz)** • Supply a NTSC crosshatch signal input. ① **V. TILT** Adjust V. 60 KEYS VR to overlap horizontal (straight) lines at both top and bottom screen with horizontal green lines. ② **H. STATIC, SIZE & LINEARITY** Adjust H. 60 STATIC VR, H. 60 SIZE VR and H. 60 LIN VR to overlap vertical (straight) screen lines on green vertical lines.

※ Adjustment is the same for R and B, except for the adjusted parts.
* "Description" in brackets [ ] refers to B convergence.

※ All adjustments are to overlap the red and blue images on the green image (lines).
R : Overlap on G or cyan image (lines)
B : Overlap on G or yellow image (lines)

- Basecally, adjustment is the same as G convergence. However, compared with G convergence, additional VRs are used. The table indicates the additional VRs for R and B only.
  Expect for G convergence, do not disturb the adjustment items of the SERVICE MENU "4. DEF".

■R & B convergence display colour switching item

Adjustment item	"4. DEF" ON	SCREEN VR
R convergence	15	B
B convergence	13	R

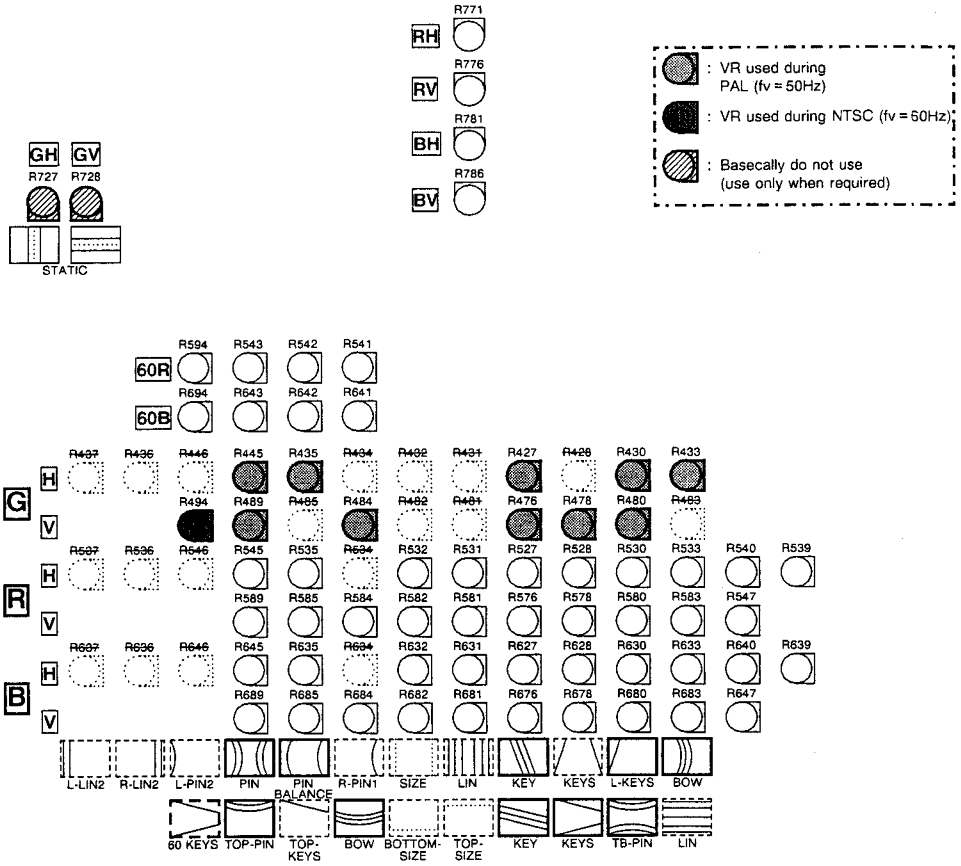
■Added VRs only for R & B convergence

Adjustment parts	Symbol		Adjustment items
	R	B	
H. SIZE VR	R532	R632	H. size
H. LIN VR	R531	R631	H. Linearity
H. L-LIN VR	R540	R640	H. Linearity
H. R-LIN VR	R539	R639	H. Linearity
H. KEYS VR	R528	R628	H. keystone distortion
H. 60 STATIC VR	R541	R641	H. static
H. 60 SIZE VR	R542	R642	H. size
H. 60 LIN VR	R543	R643	H. linearity
V. L-BOW VR	R547	R647	V. bow distortion
V. TOP-SIZE VR	R581	R681	V. size
V. BOTTOM-SIZE VR	R582	R682	V. size
V. LIN VR	R583	R683	V. linearity
V. TOP-KEYS VR	R585	R685	V. keystone distortion

■G CONVERGENCE ADJUSTMENT VR LOCATION

■G CONVERGENCE
basic ajdustment procedure

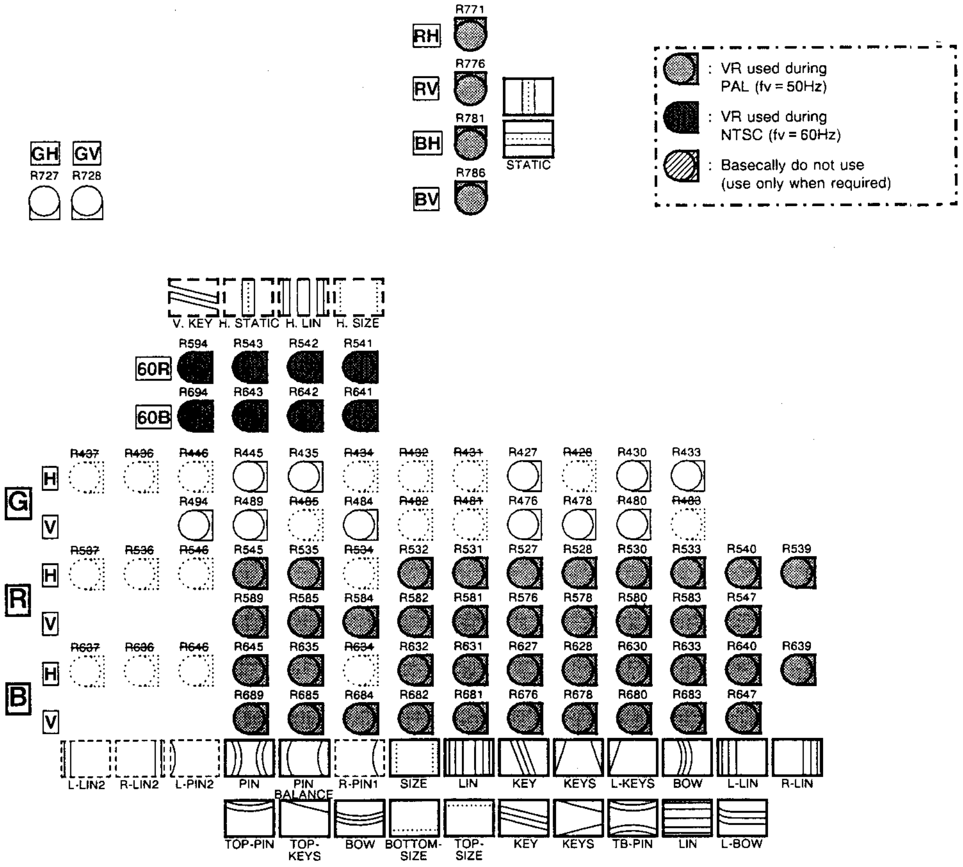
		VR symbol
①	1	R427
	2	R476
②	1	R433
	2	R484
③	1	R480
	2	R489
	3	R478
④		DEF-3 + G-CM
⑤	1	R445 + R435 + DEF-7 + DEF-8
	2	DEF-9
	3	R430
①		DEF-3
②		R494
③		DEF-5 + DEF-6
	1	
	2	
	3	
	4	


RH R771
RV R776
BH R781
BV R786
GH GV
R727 R728
STATIC
: VR used during PAL (fv = 50Hz)
: VR used during NTSC (fv = 60Hz)
: Basecally do not use (use only when required)
60R R594 R543 R542 R541
60B R694 R643 R642 R641
G
H ~~R437~~ ~~R436~~ ~~R446~~ R445 R435 ~~R434~~ ~~R432~~ ~~R431~~ R427 ~~R428~~ R430 R433
V R494 R489 ~~R485~~ R484 ~~R482~~ ~~R481~~ R476 R478 R480 ~~R483~~
R
H ~~R537~~ ~~R536~~ ~~R546~~ R545 R535 ~~R534~~ R532 R531 R527 R528 R530 R533 R540 R539
V R589 R585 R584 R582 R581 R576 R578 R580 R583 R547
B
H ~~R637~~ ~~R636~~ ~~R646~~ R645 R635 ~~R634~~ R632 R631 R627 R628 R630 R633 R640 R639
V R689 R685 R684 R682 R681 R676 R678 R680 R683 R647
L-LIN2 R-LIN2 L-PIN2 PIN PIN BALANCE R-PIN1 SIZE LIN KEY KEYS L-KEYS BOW
60 KEYS TOP-PIN TOP-KEYS BOW BOTTOM-SIZE TOP-SIZE KEY KEYS TB-PIN LIN

■R & B CONVERGENCE ADJUSTMENT VR LOCATION

■R & B CONVERGENCE
basic ajdustment procedure

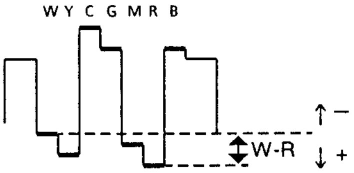
		VR symbol	
		R	B
①		R-CM	B-CM
②	1	R527	R627
	2	R576	R676
③	1	R533	R633
	2	R584	R684
④	1	R580	R680
	2	R589	R689
	3	R578	R678
	4	R585	R685
⑤	1	R581	R681
	2	R582	R682
⑥	1	R545 + R535	R645 + R635
	2	R528	R628
	3	R530	R630
⑦	1	R531	R631
	2	R540 + R539	R640 + R639
	3	R532	R632
①		R544	R644
②		R543 + R541 + R542	R643 + R641 + R642


RH R771
RV R776
BH R781
BV R786
STATIC
GH GV
R727 R728
: VR used during PAL (fv = 50Hz)
: VR used during NTSC (fv = 60Hz)
: Basecally do not use (use only when required)
V. KEY H. STATIC H. LIN H. SIZE
60R R594 R543 R542 R541
60B R694 R643 R642 R641
G
H ~~R437~~ ~~R436~~ ~~R446~~ R445 R435 ~~R434~~ ~~R432~~ ~~R431~~ R427 ~~R428~~ R430 R433
V R494 R489 ~~R485~~ R484 ~~R482~~ ~~R481~~ R476 R478 R480 ~~R483~~
R
H ~~R537~~ ~~R536~~ ~~R546~~ R545 R535 ~~R534~~ R532 R531 R527 R528 R530 R533 R540 R539
V R589 R585 R584 R582 R581 R576 R578 R580 R583 R547
B
H ~~R637~~ ~~R636~~ ~~R646~~ R645 R635 ~~R634~~ R632 R631 R627 R628 R630 R633 R640 R639
V R689 R685 R684 R682 R681 R676 R678 R680 R683 R647
L-LIN2 R-LIN2 L-PIN2 PIN PIN BALANCE R-PIN1 SIZE LIN KEY KEYS L-KEYS BOW L-LIN R-LIN
TOP-PIN TOP-KEYS BOW BOTTOM-SIZE TOP-SIZE KEY KEYS TB-PIN LIN L-BOW

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>8.
SUB BRIGHT
<2. V/C></td><td></td><td>Screen</td><td>V/C-5 : BRIGHT</td><td>1. Receive an ordinary broadcast.
2. Adjust <V/C-5> for optimum brightness.
3. Press the [MENU] key to store the adjustment value.</td></tr>
<tr><td>9.
SUB CONTRAST
<2. V/C></td><td></td><td>Screen</td><td>V/C-6 : CONT</td><td>• Confirm correct SUB BRIGHT adjustment.
1. Receive an ordinary broadcast.
2. Adjust <V/C-6> or optimum contrast.
3. Press the [MENU] key to store the adjustment value.</td></tr>
<tr><td>10.
SCREEN &
WHITE BALANCE
LOW LIGHT
◆Mainframe◆
<4. DEF></td><td>Pattern generator
<table><tr><th>Screen</th><th>"4. DEF" ON</th><th>SCREEN VR</th></tr><tr><td>R</td><td>14 + 15</td><td>G + B</td></tr><tr><td>G</td><td>13 + 15</td><td>R + B</td></tr><tr><td>B</td><td>13 + 14</td><td>R + G</td></tr></table></td><td>Screen</td><td>DEF-13 : R OFF
DEF-14 : G OFF
DEF-15 : B OFF

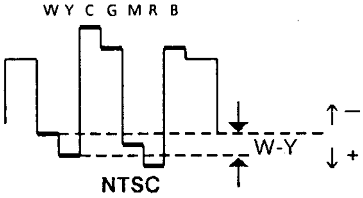
R SCREEN VR
G SCREEN VR
B SCREEN VR
[FOCUS PACK]</td><td>• Confirm correct SUB CONTRAST adjustment.
1. Supply a grayscale signal input or a colour bar signal input the colour component cut off.
2. Set <DEF-13> and <DEF-15> to ON to produce a green signal colour.
* Or reduce the SCREEN VRs indicated in the table.
3. Adjust the G SCREEN VR to where the black component does not glow (green colour not banded).
4. In the same manner, respectively adjust red and blue signal colours with the R and B SCREEN VRs.
5. Return the "4. DEF" items or SCREEN VRs to their original settings and confirm white balance at low light. If white balance is not obtained, repeat the above step 4.
In this case however, after adjusting the G SCREEN VR once, do not change its setting.</td></tr>
<tr><td>11.
WHITE BALANCE
HIGH LIGHT
<2. V/C></td><td>Pattern generator</td><td>Screen</td><td>V/C-2 : R DRIVE
V/C-4 : B DRIVE

V/C-3 : G DRIVE
[Fixed]</td><td>• Confirm proper SCREEN & WHITE BALANCE LOW LIGHT adjustment.
1. Supply an all white signal input or a colour bar signal input the colour component cut off.
2. Adjust <V/C-2> and <V/C-4> to where the overall screen or which component is white. Avoid disturbe <V/C-3>.
3. Press the [MENU] key to store the adjustment value.
4. Confirm white balance at the low light (black) side. If deviated, perform low light adjustment and repeat above step 2.
* If difficult to confirm with an all white signal, use the a crosshatch or other signal.
5. Repeat steps 1 - 4 to adjust the white balance.
6. Press the [MENU] key to store the adjustment value.</td></tr>
</table>

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr>
<td>12.
PAL/SECAM/NTSC
SUB COLOUR
◆R CRT SOCKET◆
< 2. V/C ></td>
<td>Pattern generator
Oscilloscope
[H-rate]</td>
<td>Screen
TP-R
<table><tr><th>Signal</th><th>PAL</th><th>SECAM</th><th>NTSC</th></tr><tr><td>W - R</td><td>+9V</td><td>+13V</td><td>+23V</td></tr></table>


PAL / SECAM / NTSC</td>
<td>V/C-7 : COLOUR</td>
<td>● Confirm proper WHITE BALANCE HIGH LIGHT adjustment.

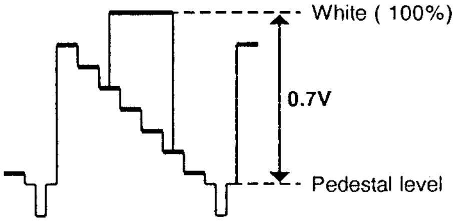
■ Without oscilloscope
1. Supply a PAL colour bar signal input.
2. Adjust <V/C-7> for optimum colour density.
3. Receive an ordinary PAL broadcast and confirm absence of abnoamality.
4. Press the [MENU] key to store the adjustment value.
5. In the same manner, adjust for SECAM and NTSC 3.58 signals.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.

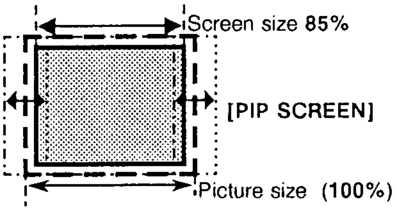
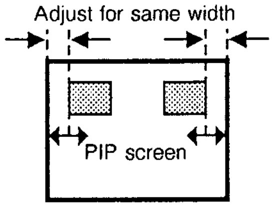
■ Adjustment using oscilloscope
1. Supply a PAL colour bar signal.
2. Connect the oscilloscope to TP-R.
3. Adjust <V/C-7> to set the difference between white and red components of the colour bar signal to the value indicated the table (+ 9V) .
4. Press the [MENU] key to store the adjustment value.
5. In the same manner, adjust for SECAM and NTSC 3.58 signals.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.</td>
</tr>
<tr>
<td>13.
NTSC
SUB TINT
◆R CRT SOCKET◆
< 2. V/C ></td>
<td>Pattern generator
Oscilloscope
[H-rate]</td>
<td>Screen
TP-R
<table><tr><th>Signal</th><th>NTSC</th></tr><tr><td>W - Y</td><td>+3V</td></tr></table>

</td>
<td>V/C-8 : TINT</td>
<td>● Confirm proper WHITE BALANCE HIGH LIGHT adjustment.

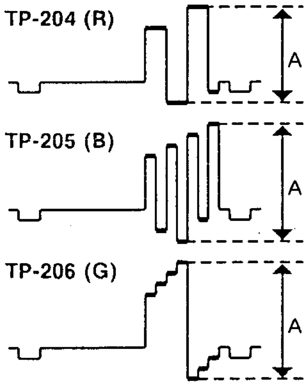
■ Without oscilloscope
1. Supply a NTSC colour bar signal input.
2. Adjust <V/C-8> for optimum tint.
3. Receive an ordinary NTSC3.58 broadcast and confirm absence of abnoamality.
4. Press the [MENU] key to store the adjustment value.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.

■ Adjustment using oscilloscope
1. Supply a NTSC colour bar signal.
2. Connect the oscilloscope to TP-R.
3. Adjust <V/C-8> to set the difference between white and yellow components of the colour bar signal to the value indicated the table (+ 3V) .
4. Press the [MENU] key to store the adjustment value.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.</td>
</tr>
</table>

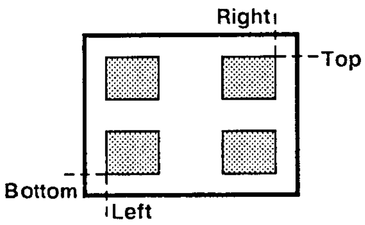
<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>14.
PIP Y LEVEL
◆PIP / TEXT◆</td><td>Pattern generator

Oscilloscope [H-rate]
 </td><td>Screen

TP-101</td><td>PIP Y LEVEL VR (R116)</td><td>1. Receive a PAL split colour bar signal (include white 100%) on both MAIN and PIP screens.
2. Connect the oscilliscope to TP-101.
3. Adjust the PIP Y LEVEL VR to to sst the level difference between pedestal abd white (100%) to 0.7V.</td></tr>
<tr><td>15.
PIP WRITE CLOCK
◆PIP / TEXT◆</td><td>Pattern generator
 </td><td>Screen</td><td>WCK transformer (T102)</td><td>1. Recieve a fv = 50Hz crosshatch signal or a vertically and horizontally symmetrical image on both MAIN and PIP screens.
2. Set to PIP mode and display the PIP screen.
3. Adjust the WCK transformer to set the horizontal display range inthe PIP picture to 85%.</td></tr>
<tr><td>16.
PIP READ CLOCK
◆PIP / TEXT◆</td><td>Pattern generator
 </td><td>Screen</td><td>RCK1 transformer (T103)
RCK2 transformer (T105)
RCK3 transformer (T104)
<table>
<tr><th>MAIN fv</th><th>PIP fv</th><th>Transf.</th></tr>
<tr><td>60</td><td>50</td><td>RCK1</td></tr>
<tr><td>50</td><td>50</td><td>RCK2</td></tr>
<tr><td>50</td><td>60</td><td>RCK3</td></tr>
</table></td><td>• Confirm proper adjustment of the PIP screen vertical and horizontal display position.
• Prepare fv = 50Hz and 60Hz crosshatch signals or vertically and horizontally symmetical images.
1. Set to PIP mode and display the PIP screen.
2. Alternately the PIP screen at the upper left and upper right. So that the PIP screen is displayed at the same distance (width) from the left and right edges of the MAIN screen, adjust the following transformer.
■MAIN = 60Hz, PIP = 50Hz : RCK1
■MAIN = 50Hz, PIP = 50Hz : RCK2
■MAIN = 50Hz, PIP = 60Hz : RCK3</td></tr>
<tr><td>17.
PIP RGB GAIN
◆PIP / TEXT◆</td><td>Pattern generator

Oscilloscope [H-rate]
 </td><td>Screen

TP-204
TP-205
TP-206</td><td>PIP R GAIN VR (R260)
PIP B GAIN VR (R261)
PIP G GAIN VR (R262)
<table>
<tr><th>TP</th><th>A</th></tr>
<tr><td>TP-204 (R)</td><td>0.6Vp-p</td></tr>
<tr><td>TP-205 (B)</td><td>0.6Vp-p</td></tr>
<tr><td>TP-206 (G)</td><td>0.8Vp-p</td></tr>
</table></td><td>1. Recieve a PAL colour bar signal on both MAIN and PIP screens.
* Be sure to receive the signal from the AERIAL (VHF/UHF) terminal.
2. Set to PIP mode and display the PIP screen.
3. Connect the oscilloscope to TP-204.
4. Adjust PIP R GAIN VR to gain A indicated in the figure to 0.6Vp-p.
5. Connect the oscilloscope to TP-205.
6. Adjust PIP B GAIN VR to gain A indicated in the figure to 0.6Vp-p.
7. Connect the oscilloscope to TP-206.
8. Adjust PIP G GAIN VR to gain A indicated in the figure to 0.8Vp-p.</td></tr>
</table>

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>18.
PIP DISPLAY POSITION
< 8. PIP ></td><td>Pattern generator</td><td>Screen</td><td rowspan="2">PIP-1 :
PIP RIGHT-H
PIP-2 :
PIP UP-V
PIP-3 :
PIP LEFT-H
PIP-4 :
PIP DOWN-V</td><td rowspan="2">● Conform correct CONVERGENCE & DEFLECTION adjustments.
● Prepare fv = 50Hz and 60Hz crosshatch signals or vretically and horizontally symmetical images.
1. Set to the PIP mode and display the PIP screen.
2. Supply a crosshatch or vertically and horizontally symmetrical image to both the MAIN and PIP screens.
3. Adjust <PIP-1>, <PIP-2>, <PIP-3> and <PIP-4> so that the PIP screen position is at the distance indicated in the table (85% of MAIN screen) from the top, bottom, left and right edges of the MAIN screen .
4. Press the [MENU] key to store the adjustment values.</td></tr>
<tr><td colspan="3">
<table>
<tr><th>Signal</th><th>PIP-1 [Right]</th><th>PIP-2 [Top]</th><th>PIP-3 [Left]</th><th>PIP-4 [Bottom]</th></tr>
<tr><td>All signals common</td><td>50mm (85%)</td><td>40mm (85%)</td><td>50mm (85%)</td><td>40mm (85%)</td></tr>
</table>


Signal combination
<table>
<tr><th>MAIN fv</th><th>PIP fv</th></tr>
<tr><td>50</td><td>50</td></tr>
<tr><td>50</td><td>60</td></tr>
<tr><td>60</td><td>50</td></tr>
<tr><td>60</td><td>60</td></tr>
</table>
</td></tr>
<tr><td>19.
PIP
WHITE BALANCE
< 8. PIP ></td><td>Pattern generator</td><td>Screen</td><td>PIP-5 : PIP R-Y
PIP-6 : PIP B-Y</td><td>● Confirm correct PIP RGB GAIN adjustment.
1. Set to the PIP mode and display the PIP screen.
2. Recieve an all white signal or a colour bar signal with the colour component cutoff on both the MAIN and PIP screens.
3. Adjust <PIP-5> and <PIP-6> so that the PIP picture white balance (highlight) is the same as the MAIN picture.
* Typical adjustment = within 20H ± 2H range
4. Press the [MENU] key to store the adjustment values.</td></tr>
</table>

AV-61PRO / (-A) / (-HK) / (-SC) STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1. SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2. SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1) Input signal	: PAL colour bar signal
(2) Setting positions of each knob / button and variable resistor	:Original setting position when shipped
(3) Internal resistance of tester	: DC 20kΩ / V
(4) Oscilloscope sweeping time	: H ⇒ 20µs /div : V ⇒ 5ms /div : Others ⇒ Sweeping time is specified
(5) Voltage values	: All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3. INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R1209 → R209

4. INDICATIONS ON THE CIRCUIT DIAGRAM

(1) Resistors

- Resistance value

No unit	: [Ω]
K	: [kΩ]
M	: [MΩ]

- Rated allowable power

No indication	: 1/6 [W]
Others	: As specified

- Type

No indication	: Carbon resistor
OMR	: Oxide metal film resistor
MFR	: Metal film resistor
MPR	: Metal plate resistor
UNFR	: Uninflammable resistor
FR	: Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2) Capacitors

- Capacitance value

1 or higher	: [pF]
less than 1	: [µF]

- Withstand voltage

No indication	: DC50 [V]
Others	: DC withstand voltage [V]
AC indicated	: AC withstand voltage [V]

* Electrolytic Capacitors [Example]

47 / 50	: Capacitance value[µF] / withstand voltage[V]

- Type

No indication	: Ceramic capacitor
MY	: Mylar capacitor
MM	: Metalized mylar capacitor
PP	: Polypropylene capacitor
MPP	: Metalized polypropylene capacitor
MF	: Metalized film capacitor
TF	: Thin film capacitor
BP	: Bipolar electrolytic capacitor
TAN	: Tantalum capacitor

(3) Coils

No unit	: [µH]
Others	: As specified

(4) Power Supply

════	: B1 (130V)
▬▬▬▬	: B2 (12V)
▬▭▬▭	: 9V
▭▭▭▭	: 5V

* Respective voltage values are indicated.

(5) Test Point

◉	: Test point
○	: Only test point display

(6) Connecting Method

□	: Connector
○	: Wrapping or soldering
→> →>┼	: Receptacle

(7) Ground Symbol

⊥	: LIVE side ground
⊥̸	: ISOLATED (NEUTRAL) side ground
⏚	: EARTH ground
▽	: DIGITAL ground

5. NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED (NEUTRAL) : (⊥̸) side GND. Therefore, care must be taken for the following points.

(1) Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED (NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2) Do not short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED (NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◇ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

July 1996 No.51125

CONTENTS

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- ■ MAIN PARTS LOCATION AND ALIGNMENTS LOCATION 2-5
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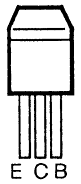
- ■ CIRCUIT DIAGRAMS AND PWB PATTERNS 2-11

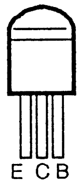
PWB ASS'Y (PARTS NAME)	ASS'Y (PARTS) No.	CIRCUIT DIAGRAMS PAGE No.	PWB PATTERNS PAGE No.
SIGNAL PWB ASS'Y	SKB -1001A	2-13 to 16	2-11, 12
FRONT CONTROL PWB ASS'Y	SKB-8101A	2-13	2-18
REMO-CON PWB ASS'Y	SKB-8102A	2-13	2-57
AV TERMINAL PWB ASS'Y	SKB-1201A	2-19, 20	2-57
PIP / TEXT PWB ASS'Y	SKB-0T001A	2-21 to 26	2-27 to 30
3D Y/C SEP. MODULE	SKB-0Y001A	2-31	---------
G CRT SOCKET PWB ASS'Y	SKB-3001A	2-31	2-32
B CRT SOCKET PWB ASS'Y	SKB-3002A	2-31	2-32
R CRT SOCKET PWB ASS'Y	SKB-3003A	2-31	2-32
AUDIO PWB ASS'Y	SKB-6001A	2-33 to 38	2-39 to 42
PIN JACK PWB ASS'Y	SKB-06101A	2-38	2-57
POWER PWB ASS'Y	SKB-9001A	2-43, 44	2-45, 46
DEF. PWB ASS'Y	SKB-2001A	2-47 to 50	2-51, 52
CONVERGENCE PWB ASS'Y	SKB-8001A	2-53, 54	2-55, 56
REMOTE CONTROL UNIT	RM-C995-2	2-58	----------

SEMICONDUCTORS SHAPES

TRANSISTORS



2SA1309A(QR)
2SA933S(QR)
2SA933SA(QR)
2SC1740S(QR)
2SC3311A(QR)
DTC114ES
DTC124ES
DTC124ESA
DTC143XS



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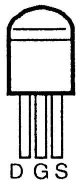
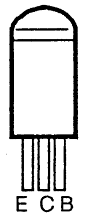
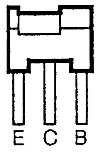


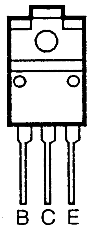
2SK105(E)



2SA1321
2SA949(Y)C1
2SC1573(QR)
2SC2229(Y)
2SC2655(Y)
2SC3334



2SC4502
2SC5083(L-P)



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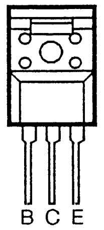
2SB950A
2SD1266A(QP)
2SD1276A(QP)



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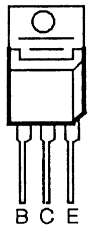

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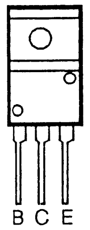

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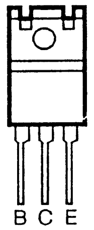

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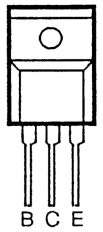

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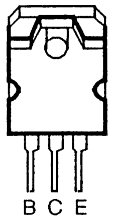
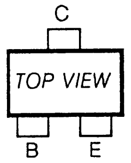
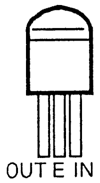


2SD1090


C
TOP VIEW
B E

2SA1307K(QR)
2SA1162(YG)
2SC2412K(QR)
2SC2712(YG)
DTC124EKA
DTC144EK
DTC323TK
DTC363TK

ICs



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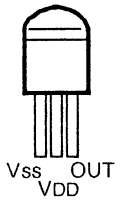
AN78L09



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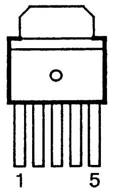

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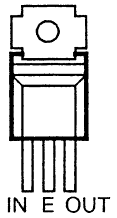

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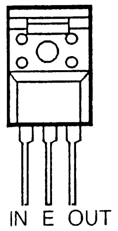

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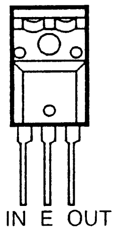
KIA7808PI
KIA7809PI
KIA7812PI



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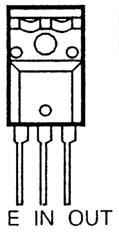

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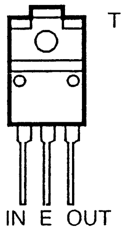

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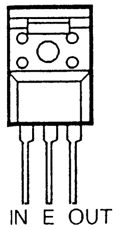

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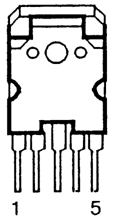

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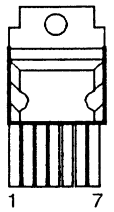

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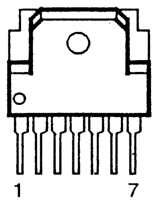

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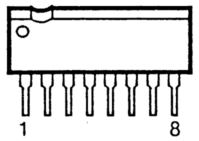

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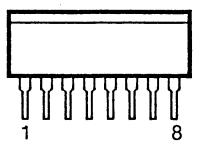

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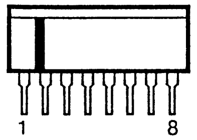

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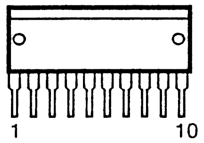

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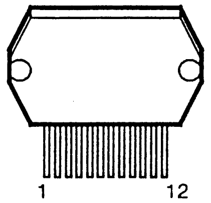

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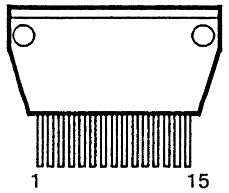

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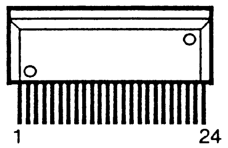

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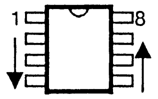

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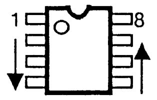

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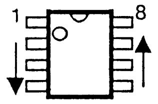

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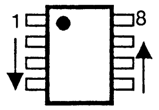

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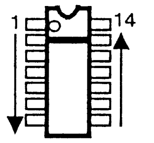

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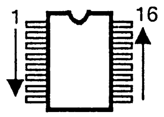

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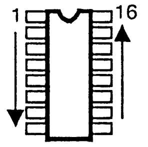

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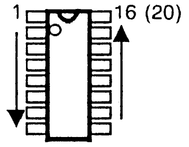

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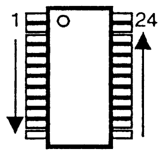

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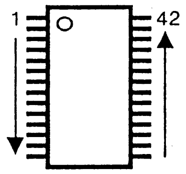

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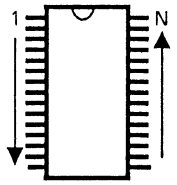

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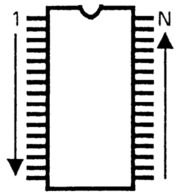

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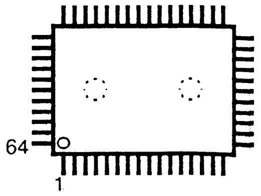

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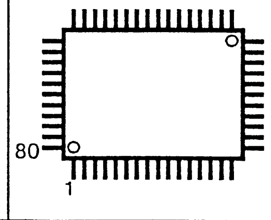
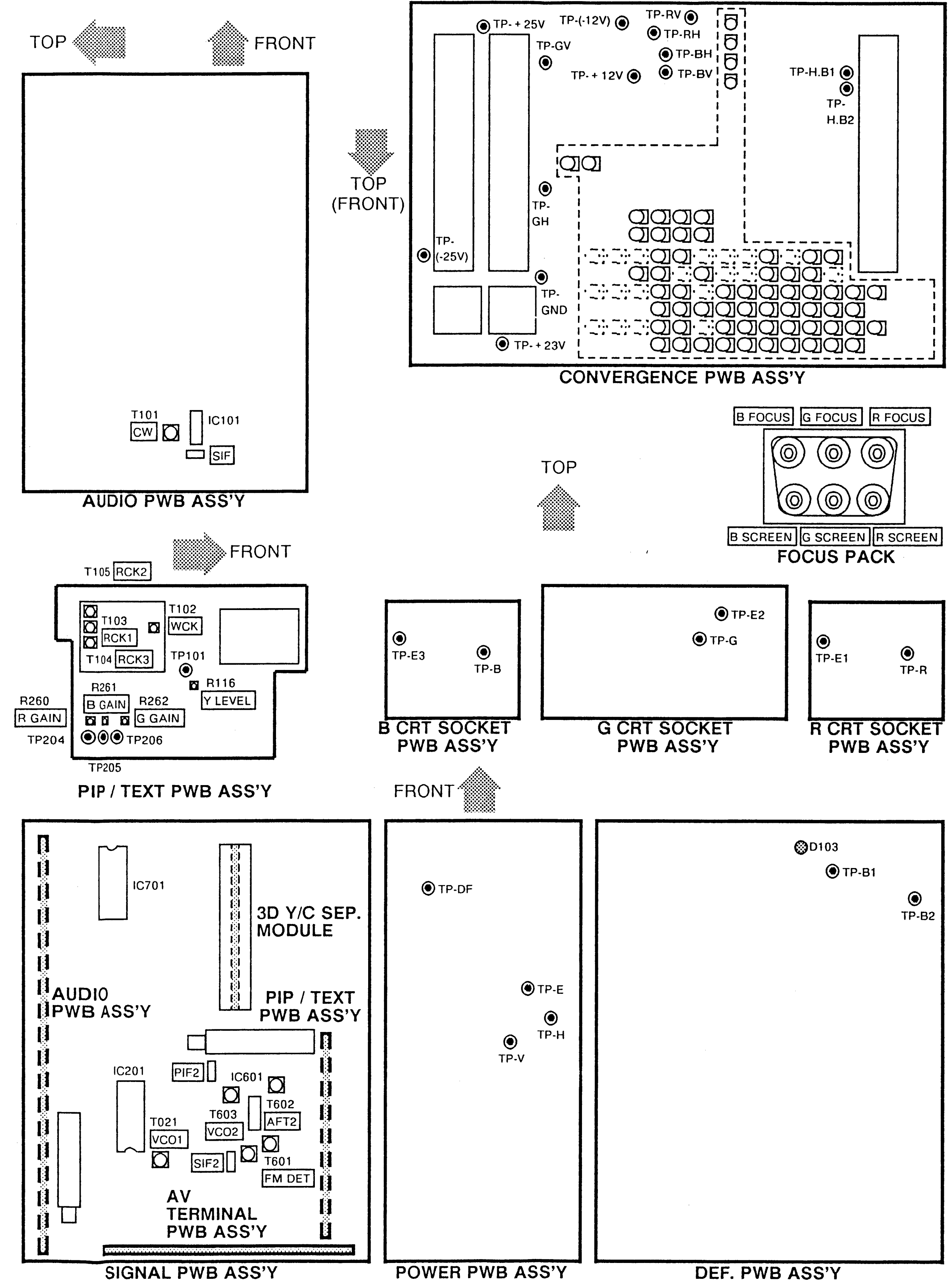


UPD6403AGF

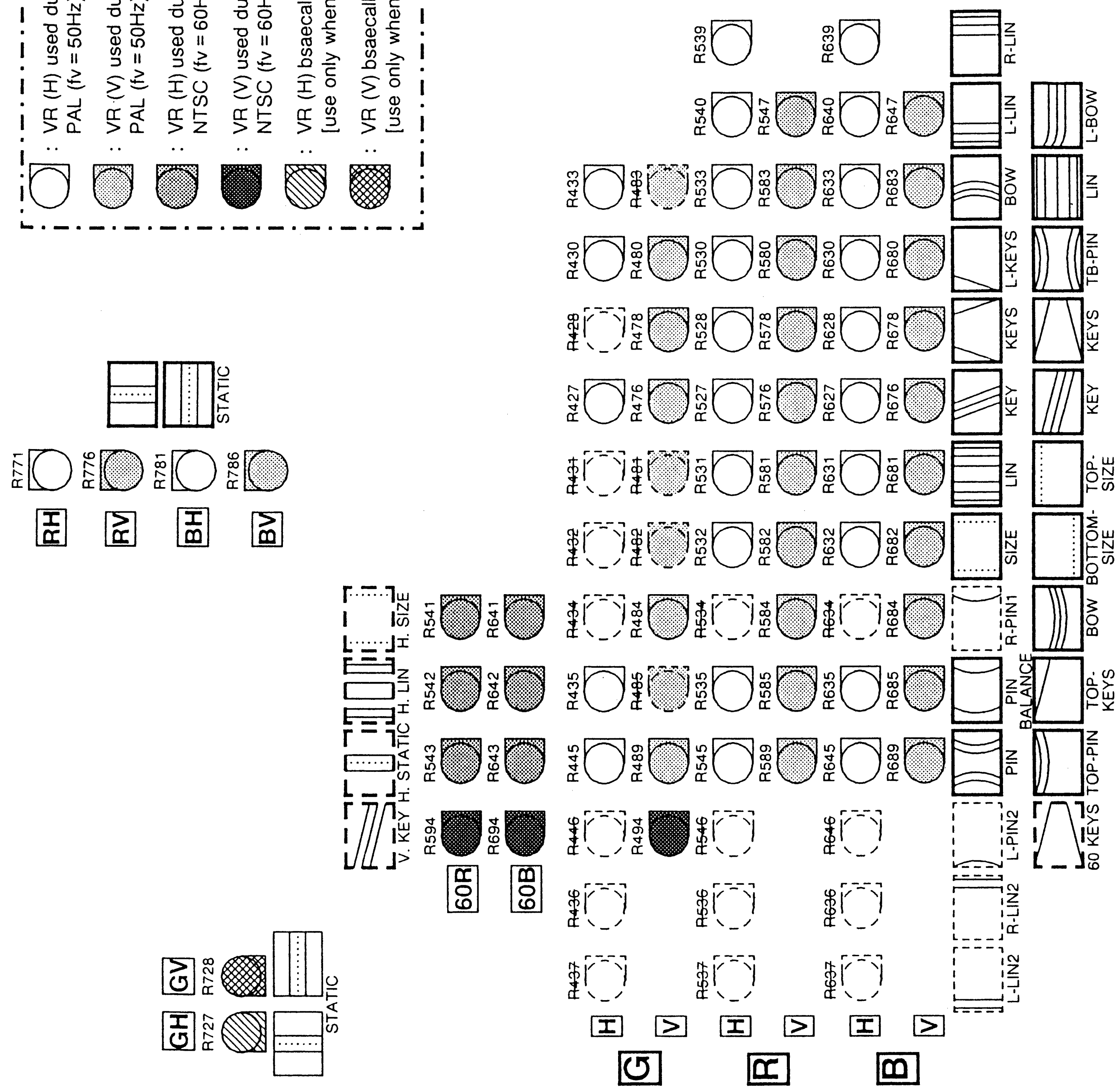
MAIN PARTS AND ALIGMENT LOCATION

※Refer to a next page regarding convergence related VRs (enclosed by dashed line) .

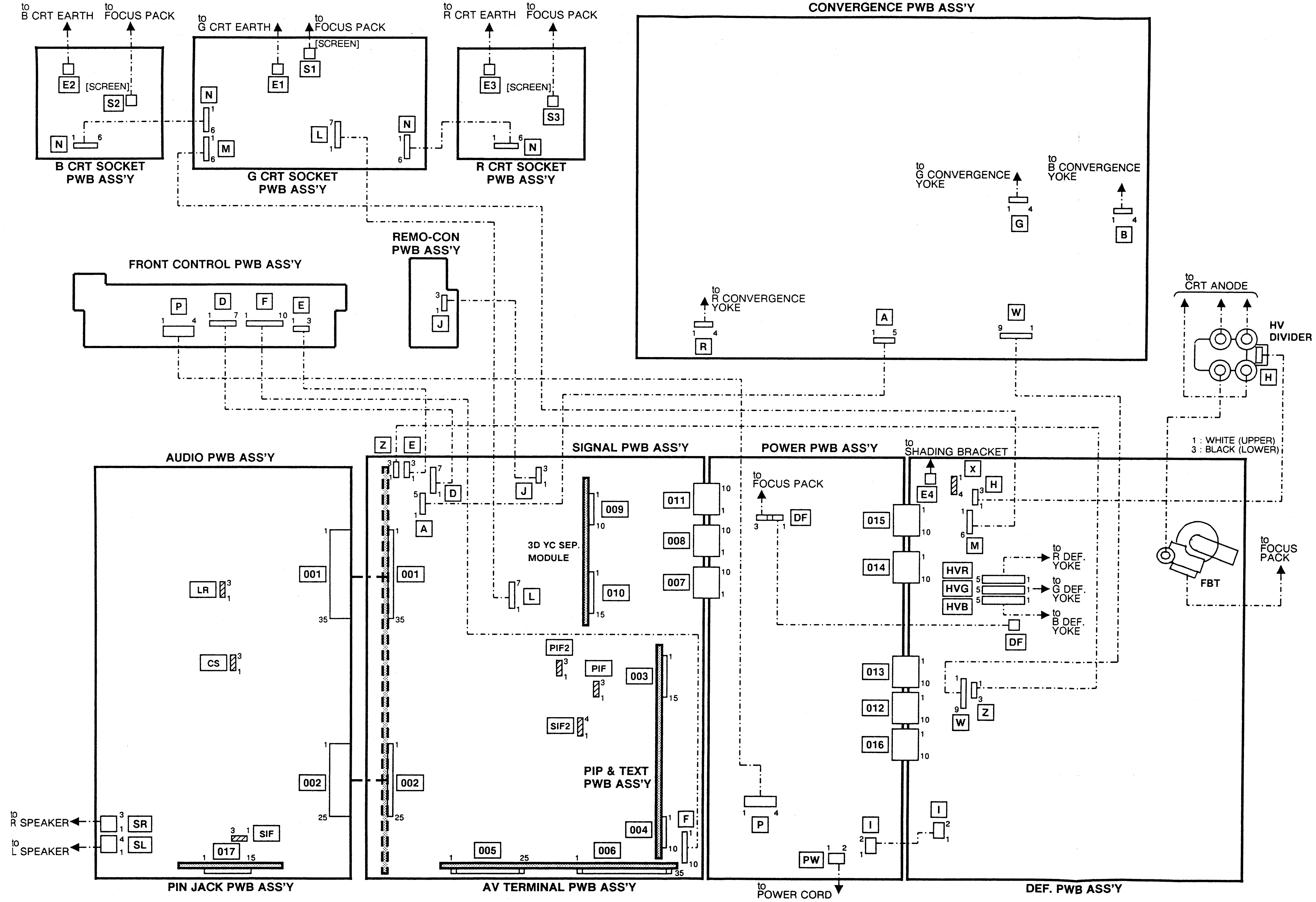

TOP
FRONT
TOP (FRONT)
TP-+25V
TP-(-12V)
TP-RV
TP-RH
TP-GV
TP-BH
TP-+12V
TP-BV
TP-H.B1
TP-H.B2
TP-GH
TP-(-25V)
TP-GND
TP-+23V
CONVERGENCE PWB ASS'Y
B FOCUS
G FOCUS
R FOCUS
B SCREEN
G SCREEN
R SCREEN
FOCUS PACK
TOP
T101
CW
IC101
SIF
AUDIO PWB ASS'Y
FRONT
T105
RCK2
T102
T103
WCK
RCK1
T104
RCK3
TP101
R116
Y LEVEL
R261
B GAIN
R262
G GAIN
R260
R GAIN
TP204
TP206
TP205
PIP / TEXT PWB ASS'Y
TP-E3
TP-B
B CRT SOCKET PWB ASS'Y
TP-E2
TP-G
G CRT SOCKET PWB ASS'Y
TP-E1
TP-R
R CRT SOCKET PWB ASS'Y
FRONT
IC701
3D Y/C SEP. MODULE
AUDIO PWB ASS'Y
PIP / TEXT PWB ASS'Y
IC201
PIF2
IC601
T602
AFT2
T603
VCO2
T021
VCO1
SIF2
T601
FM DET
AV TERMINAL PWB ASS'Y
SIGNAL PWB ASS'Y
TP-DF
TP-E
TP-H
TP-V
POWER PWB ASS'Y
D103
TP-B1
TP-B2
DEF. PWB ASS'Y

■CONVERGENCE PWB ASS'Y VRs LOCATION

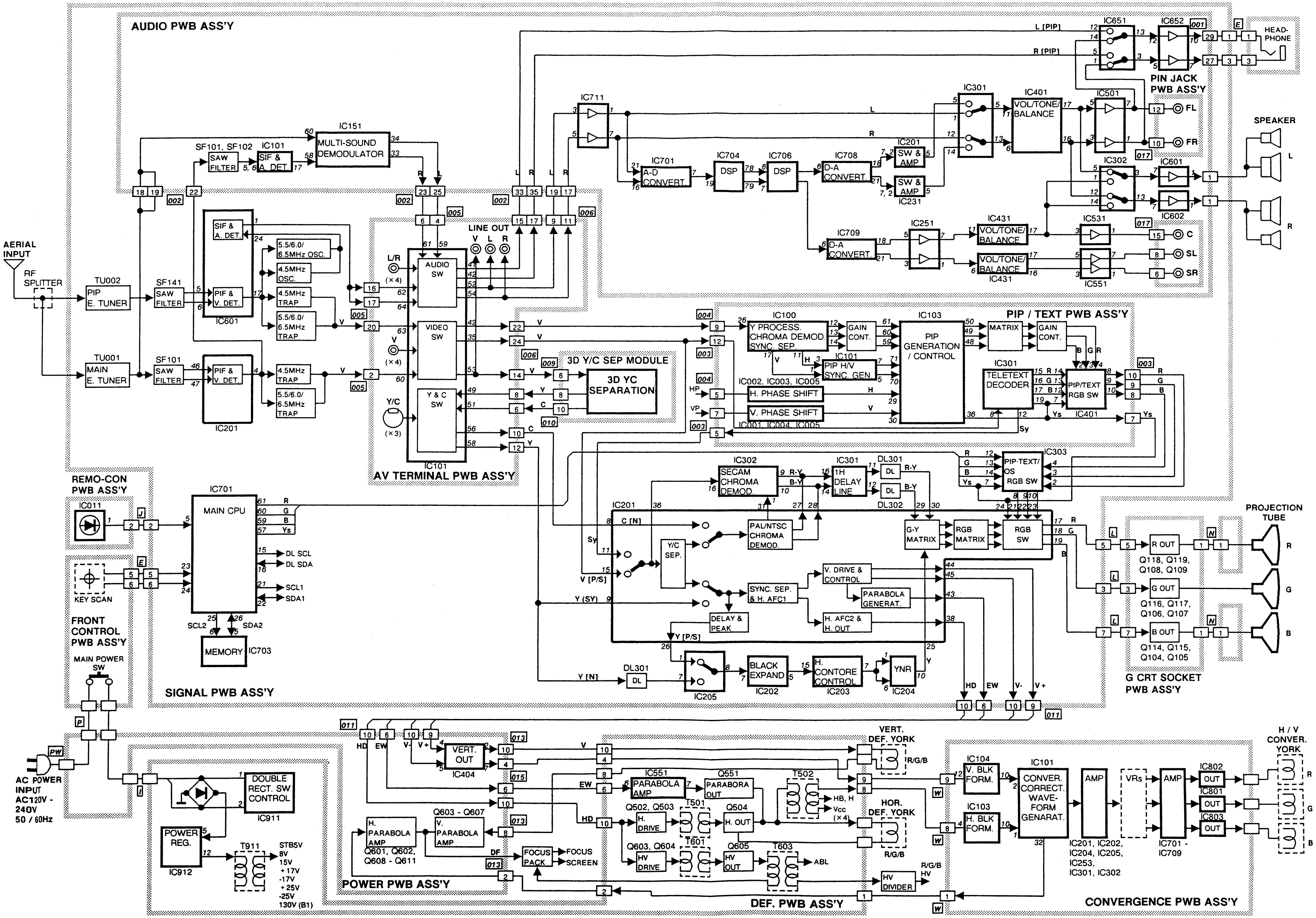
○ : VR (H) used during PAL (fv = 50Hz)
░ : VR (V) used during PAL (fv = 50Hz)
▒ : VR (H) used during NTSC (fv = 60Hz)
● : VR (V) used during NTSC (fv = 60Hz)
▨ : VR (H) bsaecally do not use [use only when required]
▦ : VR (V) bsaecally do not use [use only when required]


R539
R639
R-LIN
R540
R547
R640
R647
L-LIN
L-BOW
R433
~~R483~~
R533
R583
R633
R683
BOW
LIN
R430
R480
R530
R580
R630
R680
L-KEYS
TB-PIN
~~R428~~
R478
R528
R578
R628
R678
KEYS
KEYS
R427
R476
R527
R576
R627
R676
KEY
KEY
~~R431~~
~~R481~~
R531
R581
R631
R681
LIN
TOP-SIZE
~~R432~~
~~R482~~
R532
R582
R632
R682
SIZE
BOTTOM-SIZE
~~R434~~
R484
~~R534~~
R584
~~R634~~
R684
R-PIN1
BOW
R435
~~R485~~
R535
R585
R635
R685
PIN BALANCE
TOP-KEYS
R445
R489
R545
R589
R645
R689
PIN
TOP-PIN
~~R446~~
R494
~~R546~~
~~R646~~
L-PIN2
60 KEYS
~~R436~~
~~R536~~
~~R636~~
R-LIN2
~~R437~~
~~R537~~
~~R637~~
L-LIN2
H
V
H
V
H
V
G
R
B
H. SIZE
R541
R641
H. LIN
R542
R642
H. STATIC
R543
R643
V. KEY
R594
R694
60R
60B
STATIC
R771
RH
R776
RV
R781
BH
R786
BV
GV
R728
GH
R727
STATIC

WIRING DIAGRAM


to B CRT EARTH
to FOCUS PACK
E2
[SCREEN]
S2
N
B CRT SOCKET PWB ASS'Y
to G CRT EARTH
to FOCUS PACK
[SCREEN]
S1
E1
N
M
L
G CRT SOCKET PWB ASS'Y
to R CRT EARTH
to FOCUS PACK
E3
[SCREEN]
S3
N
R CRT SOCKET PWB ASS'Y
CONVERGENCE PWB ASS'Y
to G CONVERGENCE YOKE
G
to B CONVERGENCE YOKE
B
to R CONVERGENCE YOKE
R
A
W
FRONT CONTROL PWB ASS'Y
P
D
F
E
REMO-CON PWB ASS'Y
J
to CRT ANODE
HV DIVIDER
H
1 : WHITE (UPPER)
3 : BLACK (LOWER)
AUDIO PWB ASS'Y
LR
CS
001
002
SR
SL
SIF
017
to R SPEAKER
to L SPEAKER
PIN JACK PWB ASS'Y
Z
E
SIGNAL PWB ASS'Y
D
J
A
001
002
009
010
3D YC SEP. MODULE
L
PIF2
PIF
SIF2
003
004
PIP & TEXT PWB ASS'Y
F
005
006
011
008
007
AV TERMINAL PWB ASS'Y
POWER PWB ASS'Y
to FOCUS PACK
DF
015
014
013
012
016
P
I
PW
to POWER CORD
to SHADING BRACKET
E4
X
H
M
HVR
HVG
HVB
to R DEF. YOKE
to G DEF. YOKE
to B DEF. YOKE
DF
W
Z
I
FBT
to FOCUS PACK
DEF. PWB ASS'Y

BLOCK DIAGRAM

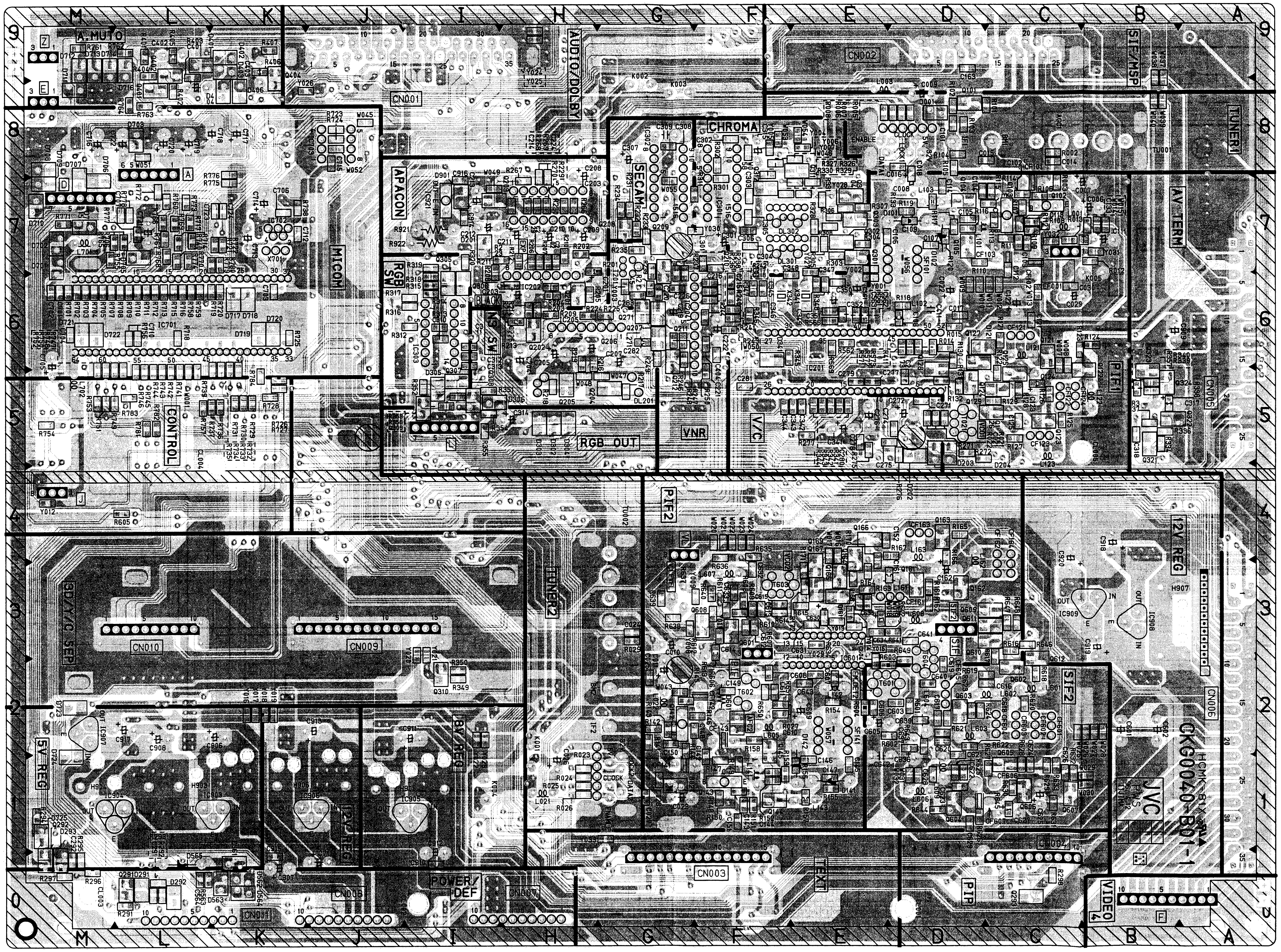

AUDIO PWB ASS'Y
AERIAL INPUT
RF SPLITTER
TU002
PIP E. TUNER
TU001
MAIN E. TUNER
SF141
SAW FILTER
SF101
SAW FILTER
SF101, SF102
SAW FILTER
IC101
SIF & A. DET.
IC151
MULTI-SOUND DEMODULATOR
IC601
SIF & A. DET.
PIF & V. DET.
IC201
PIF & V. DET.
5.5/6.0/6.5MHz OSC.
4.5MHz OSC.
4.5MHz TRAP
5.5/6.0/6.5MHz TRAP
LINE OUT
V L R
L/R (×4)
V (×4)
Y/C (×3)
AUDIO SW
VIDEO SW
Y & C SW
IC101
AV TERMINAL PWB ASS'Y
3D Y/C SEP MODULE
3D YC SEPARATION
IC711
IC701
A-D CONVERT
IC704
DSP
IC706
DSP
IC708
D-A CONVERT
IC709
D-A CONVERT
IC201
SW & AMP
IC231
SW & AMP
IC301
IC401
VOL/TONE/ BALANCE
IC501
IC302
IC601
IC602
IC251
IC431
VOL/TONE/ BALANCE
IC531
IC551
IC651
IC652
L [PIP]
R [PIP]
HEAD-PHONE
PIN JACK PWB ASS'Y
FL
FR
C
SL
SR
SPEAKER
L
R
PIP / TEXT PWB ASS'Y
IC100
Y PROCESS. CHROMA DEMOD. SYNC. SEP.
GAIN CONT.
IC103
PIP GENERATION / CONTROL
MATRIX
GAIN CONT.
IC101
PIP H/V SYNC. GEN.
IC002, IC003, IC005
H. PHASE SHIFT
V. PHASE SHIFT
IC001, IC004, IC005
IC301
TELETEXT DECODER
PIP/TEXT RGB SW
IC401
HP
VP
Ys
Sy
IC303
PIP·TEXT/OS RGB SW
REMO-CON PWB ASS'Y
IC011
IC701
MAIN CPU
DL SCL
DL SDA
SCL1
SDA1
SCL2
SDA2
MEMORY
IC703
KEY SCAN
FRONT CONTROL PWB ASS'Y
MAIN POWER SW
SIGNAL PWB ASS'Y
IC302
SECAM CHROMA DEMOD.
IC301
1H DELAY LINE
DL301
DL302
DL
R-Y
B-Y
IC201
C [N]
V [P/S]
Y (SY)
Y/C SEP.
PAL/NTSC CHROMA DEMOD.
SYNC. SEP. & H. AFC1
V. DRIVE & CONTROL
PARABOLA GENERAT.
H. AFC2 & H. OUT
DELAY & PEAK
Y [P/S]
G-Y MATRIX
RGB MATRIX
RGB SW
HD
EW
V-
V+
DL301
Y [N]
IC205
BLACK EXPAND
IC202
H. CONTORE CONTROL
IC203
YNR
IC204
PROJECTION TUBE
R OUT
Q118, Q119, Q108, Q109
G OUT
Q116, Q117, Q106, Q107
B OUT
Q114, Q115, Q104, Q105
G CRT SOCKET PWB ASS'Y
AC POWER INPUT AC120V - 240V 50 / 60Hz
DOUBLE RECT. SW CONTROL
IC911
POWER REG.
IC912
T911
STB5V
8V
15V
+17V
-17V
+25V
-25V
130V (B1)
VERT. OUT
IC404
H. PARABOLA AMP
Q601, Q602, Q608 - Q611
Q603 - Q607
V. PARABOLA AMP
DF
FOCUS PACK
FOCUS
SCREEN
POWER PWB ASS'Y
IC551
PARABOLA AMP
Q551
PARABORA OUT
T502
HB, H
Vcc (×4)
Q502, Q503
H. DRIVE
T501
Q504
H. OUT
Q603, Q604
HV DRIVE
T601
Q605
HV OUT
T603
ABL
HV DIVIDER
R/G/B HV
DEF. PWB ASS'Y
VERT. DEF. YORK
R/G/B
HOR. DEF. YORK
R/G/B
IC104
V. BLK FORM.
IC103
H. BLK FORM.
IC101
CONVER. CORRECT. WAVE-FORM GENARAT.
AMP
VRs
AMP
IC201, IC202, IC204, IC205, IC253, IC301, IC302
IC701 - IC709
IC802
IC801
IC803
OUT
H / V CONVER. YORK
CONVERGENCE PWB ASS'Y

CIRCUIT DIAGRAMS AND PWB PATTERNS

SIGNAL PWB PATTERN (SKB-1001A)

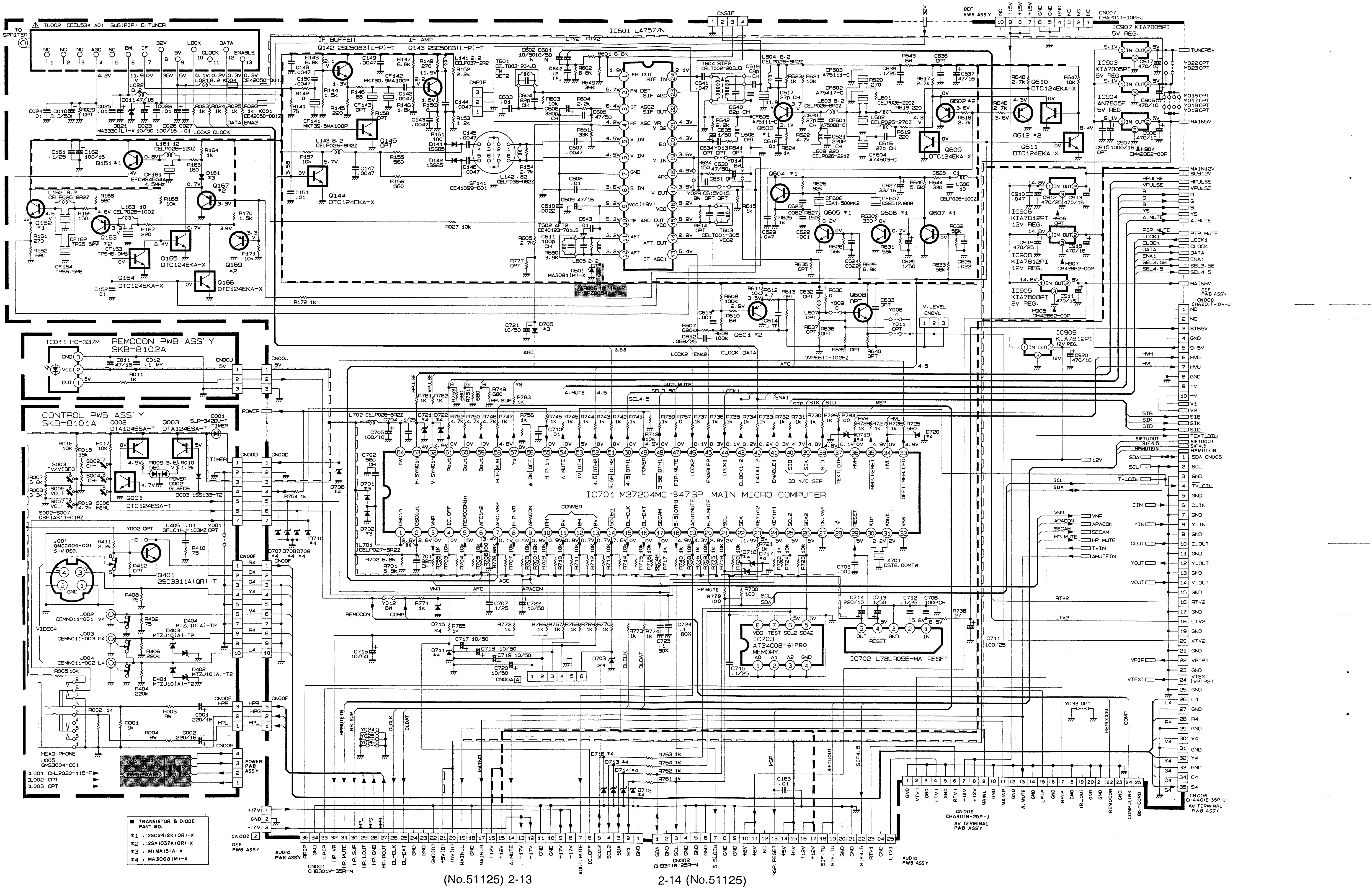
⬅ FRONT

(Magnification rate 100%)


M
L
K
J
I
H
G
F
E
D
C
B
A
9
8
7
6
5
4
3
2
1
0
A.MUTO
AUDIO/DOLBY
SIF/MSP
TUNER1
CN001
CN002
CHROMA
SECAM
APACON
MICOM
AV-TERM
RGB SW
CONTROL
RGB OUT
VNR
V/C
PIF1
CN005
PIF2
TUNER2
12V REG
STF2
3D/Y/C SEP
CN010
CN009
5V REG
POWER/DEF
CN003
CN004
TEXT
PIP
VIDEO 4
CN006
CN007
CN008
CN011
JVC
CKG0040-B01-1

SIGNAL / FRONT CONTROL / REMO-CON PWB CIRCUIT DIAGRAMS - 1/2

Refer to the following PWB pattern. : SIGNAL PWB PATTERN 2-15page, FRONT CONTROL / REMO-CON PWB PATTERN 2-57page

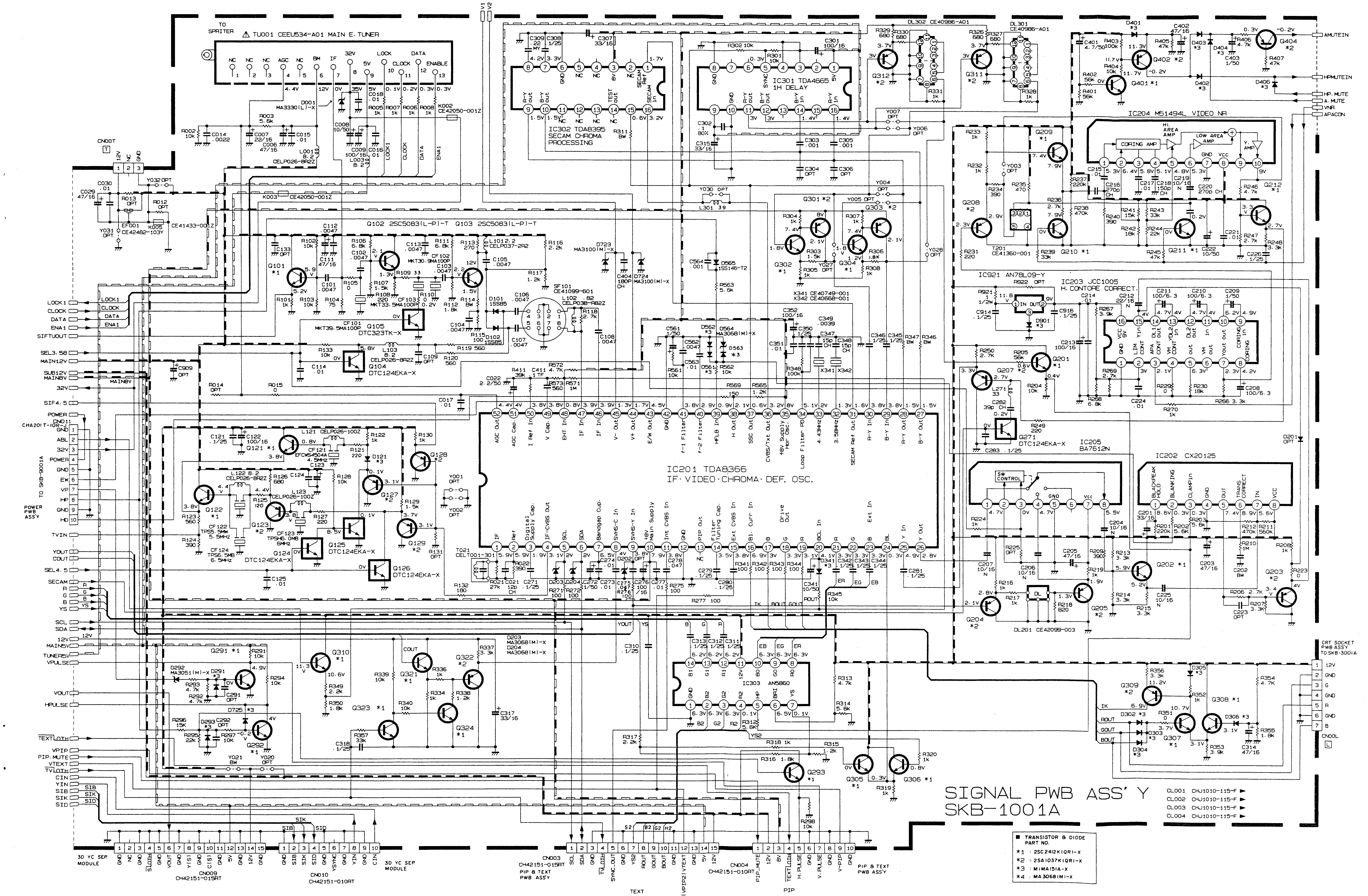

TU002 CEEU534-A01 SUB(PIP) E.TUNER
TO SPRITER
IC601 LA7577N
IF BUFFER
IF AMP
Q142 2SC5083(L-P)-T
Q143 2SC5083(L-P)-T
SF141 CE41099-601
T604 SIF2
Q603
Q602 *2
Q609 DTC124EKA-X
Q610 DTC124EKA-X
Q611 DTC124EKA-X
Q612 *2
Q604 *1
Q605 *1
Q606 *1
Q607 *1
Q601 *2
Q608 OPT
IC907 KIA7805PI 5V REG.
IC903 KIA7805PI 5V REG.
IC904 AN7805F 5V REG.
IC906 KIA7812PI 12V REG.
IC908 KIA7812PI 12V REG.
IC905 KIA7808PI 8V REG.
IC909 KIA7812PI 12V REG.
CN007 CHA201T-10R-J
CN008 CHA201T-10R-J
DEF. PWB ASS'Y
CNSIF
Q161 *1
Q162 *1
Q163 *2
Q164 DTC124EKA-X
Q165 DTC124EKA-X
Q166 DTC124EKA-X
Q167 *2
Q169 *2
Q144 DTC124EKA-X
Q145 OPT
IC011 HC-337M
REMOCON PWB ASS'Y SKB-8102A
CONTROL PWB ASS'Y SKB-8101A
Q002 DTA124ESA-T
Q003 DTA124ESA-T
Q001 DTC124ESA-T
D001 SLR-342OU-T TIMER
D002 GL3ED8 POWER
S001 TV/VIDEO
S002 CH+
S004 CH-
S005 VOL+
S007 VOL-
S006 MENU
J001 OMCC004-C01 S-VIDEO
Q401 2SC3311A(QR)-T
J002 CEMN011-001 V4
J003 CEMN011-003 R4
J004 CEMN011-002 L4
VIDEO4
J005 QMS3004-C01 HEAD PHONE
S901 QSP4K21-C01 MAIN POWER
CL001 CHJ2030-115-F
CL002 OPT
CL003 OPT
CN00A
CN00B
CN00D
CN00E
CN00F
CN00J
CN00P
POWER PWB ASS'Y
IC701 M37204MC-B47SP MAIN MICRO COMPUTER
IC703 AT24C08-61PRO MEMORY
IC702 L78LR05E-MA RESET
X701 CST8.00MTW
CN001 CHB301W-35R-M
CN002 CHB301W-25R-M
AUDIO PWB ASS'Y
CN005 CHA401N-25P-J AV TERMINAL PWB ASS'Y
CN006 CHA401B-35P-J AV TERMINAL PWB ASS'Y
CN00Z
V.LEVEL CNOVL

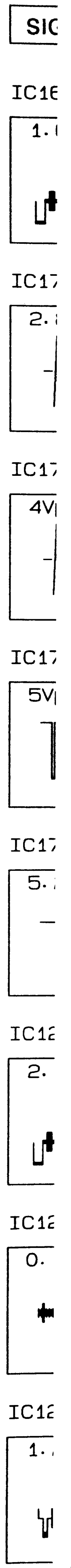
■ TRANSISTOR & DIODE PART NO.

- *1 : 2SC2412K(QR)-X
- *2 : 2SA1037K(QR)-X
- *3 : M1MA151A-X
- *4 : MA3068(M)-X

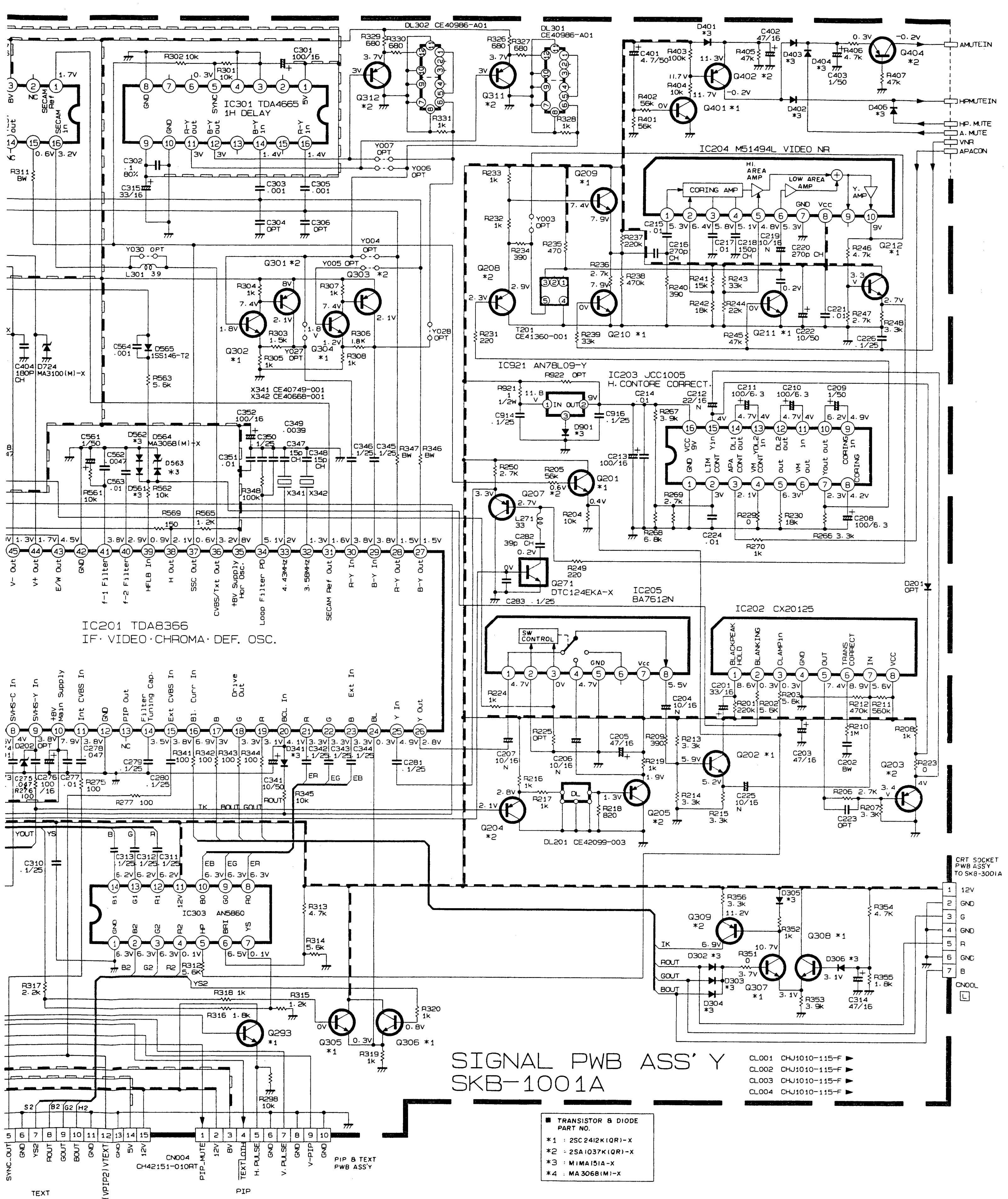
SIGNAL / FRONT CONTROL / REMO-CON PWB CIRCUIT DIAGRAMS - 2/2

Refer to the following PWB pattern. : SIGNAL PWB PATTERN 2-15page, FRONT CONTROL / REMO-CON PWB PATTERN 2-57page

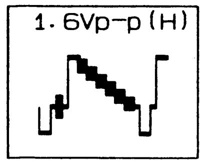

SIGNAL PWB ASS' Y
SKB-1001A
TU001 CEEU534-A01 MAIN E. TUNER
TO SPRITER
IC302 TDA8395 SECAM CHROMA PROCESSING
IC301 TDA4665 1H DELAY
DL302 CE40986-A01
DL301 CE40986-A01
IC204 M51494L VIDEO NR
CORING AMP
LOW AREA AMP
HI. AREA AMP
Y. AMP
IC921 AN78L09-Y
IC203 JCC1005 H. CONTORE CORRECT.
IC201 TDA8366 IF·VIDEO·CHROMA·DEF. OSC.
IC205 BA7612N
SW CONTROL
IC202 CX20125
IC303 AN5860
DL201 CE42099-003
Q102 2SC5083(L-P)-T Q103 2SC5083(L-P)-T
SF101 CE41099-601
X341 CE40749-001
X342 CE40668-001
T201 CE41360-001
T021 CELT001-301
CN00T
CN011
TO SKB-9001A
POWER PWB ASS'Y
CRT SOCKET PWB ASS'Y TO SKB-3001A
CN00L
LOCK1
CLOCK
DATA
ENA1
SIFTUOUT
SEL3.58
MAIN12V
SUB12V
MAIN9V
32V
SIF4.5
CHA201T-10R-J
POWER
ABL
GND
EW
VP
HP
HD
TVIN
YOUT
COUT
SEL4.5
SECAM
R
G
B
YS
SCL
SDA
12V
MAIN5V
TUNER5V
VPULSE
VOUT
HPULSE
TEXT_LOTH
VPIP
PIP. MUTE
VTEXT
TV_LOTH
CIN
YIN
SIB
SIK
SID
AMUTEIN
HPMUTEIN
HP. MUTE
A. MUTE
VNR
APACON
CL001 CHJ1010-115-F
CL002 CHJ1010-115-F
CL003 CHJ1010-115-F
CL004 CHJ1010-115-F
30 YC SEP MODULE
CN009 CH42151-015RT
CN010 CH42151-010RT
CN003 CH42151-015RT
PIP & TEXT PWB ASS'Y
CN004 CH42151-010RT
TEXT
TO SKB-0T001A
PIP
■ TRANSISTOR & DIODE PART NO.
*1 : 2SC2412K(QR)-X
*2 : 2SA1037K(QR)-X
*3 : MIMA151A-X
*4 : MA3068(M)-X

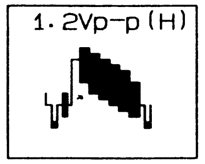

SIG
IC16
IC17
IC17
IC17
IC17
IC12
IC12
IC12

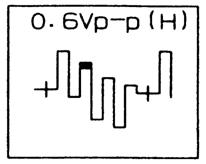
Refer to the following PWB pattern. : SIGNAL PWB PATTERN 2-15page, FRONT CONTROL / REMO-CON PWB PATTERN 2-57page

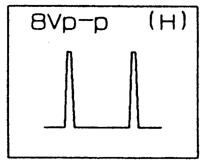

IC301 TDA4665 1H DELAY
IC204 M51494L VIDEO NR
CORING AMP
HI AREA AMP
LOW AREA AMP
Y AMP
IC921 AN78L09-Y
IC203 JCC1005 H. CONTORE CORRECT.
IC201 TDA8366 IF· VIDEO· CHROMA· DEF. OSC.
IC205 BA7612N
SW CONTROL
IC202 CX20125
IC303 AN5860
DL301 CE40986-A01
DL302 CE40986-A01
DL201 CE42099-003
T201 CE41360-001
X341 CE40749-001
X342 CE40668-001
Q271 DTC124EKA-X
AMUTEIN
HPMUTEIN
HP. MUTE
A. MUTE
VNR
APACON
CRT SOCKET PWB ASS'Y TO SKB-3001A
12V
GND
G
GND
R
GND
B
CN00L
CN004 CH42151-010RT
TO SKB-0T001A
TEXT
PIP
PIP & TEXT PWB ASS'Y
SIGNAL PWB ASS' Y
SKB-1001A
CL001 CHJ1010-115-F
CL002 CHJ1010-115-F
CL003 CHJ1010-115-F
CL004 CHJ1010-115-F
■ TRANSISTOR & DIODE PART NO.
*1 : 2SC2412K(QR)-X
*2 : 2SA1037K(QR)-X
*3 : M1MA151A-X
*4 : MA3068(M)-X

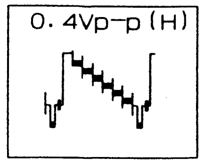
SIGNAL PWB CIRCUIT WAVEFORMS

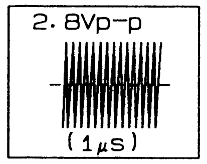
IC1601 ⑰


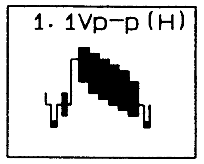
IC1201 ⑪


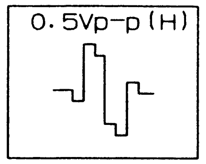
IC1201 ㉗


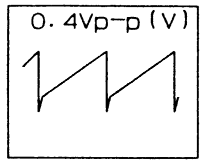
IC1201 ㊴


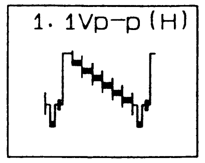
IC1203 ⑮


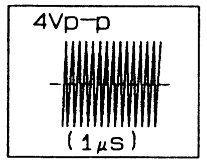
IC1701 ㉚


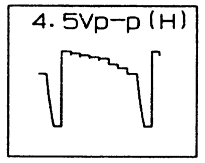
IC1201 ⑮


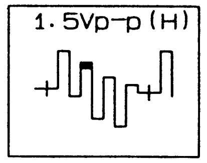
IC1201 ㉘


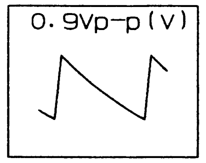
IC1201 ㊹


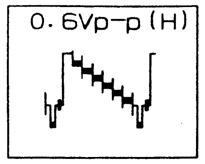
IC1203 ⑦


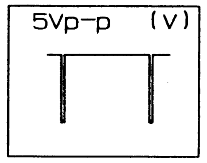
IC1701 ㉛


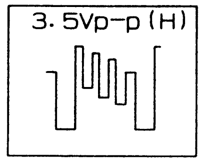
IC1201 ⑯


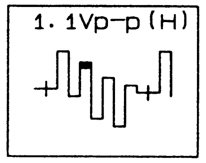
IC1201 ㉙


IC1201 ㊺


IC1204 ⑥


IC1701 (62)


IC1201 ⑰


IC1201 ㉚


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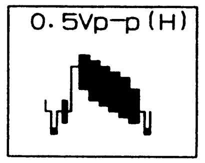
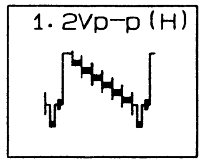
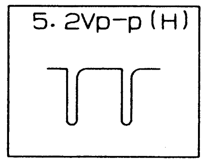
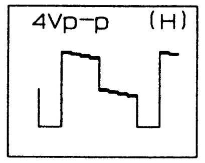
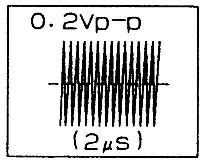
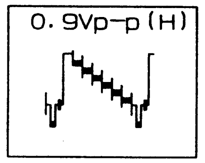


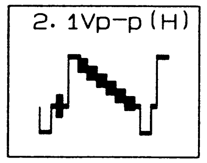
IC1204 ⑩


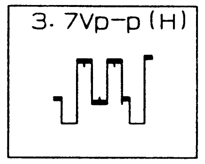
IC1701 (63)


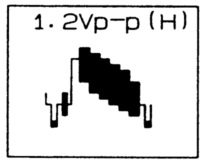
IC1201 ⑱


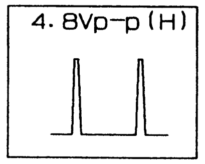
IC1201 ㉛


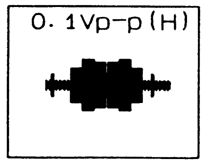
IC1205 ⑧


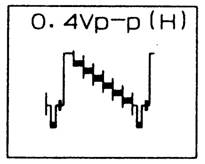
IC1201 ④


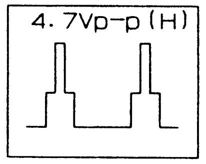
IC1201 ⑲


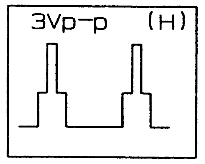
IC1201 ㊱


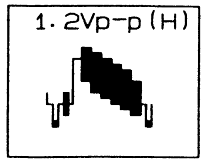
IC1202 ②


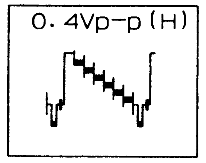
IC1201 ⑧


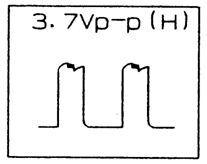
IC1201 ㉕


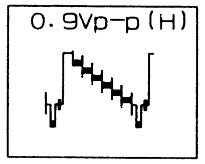
IC1201 ㊲


IC1202 ③


IC1201 ⑨


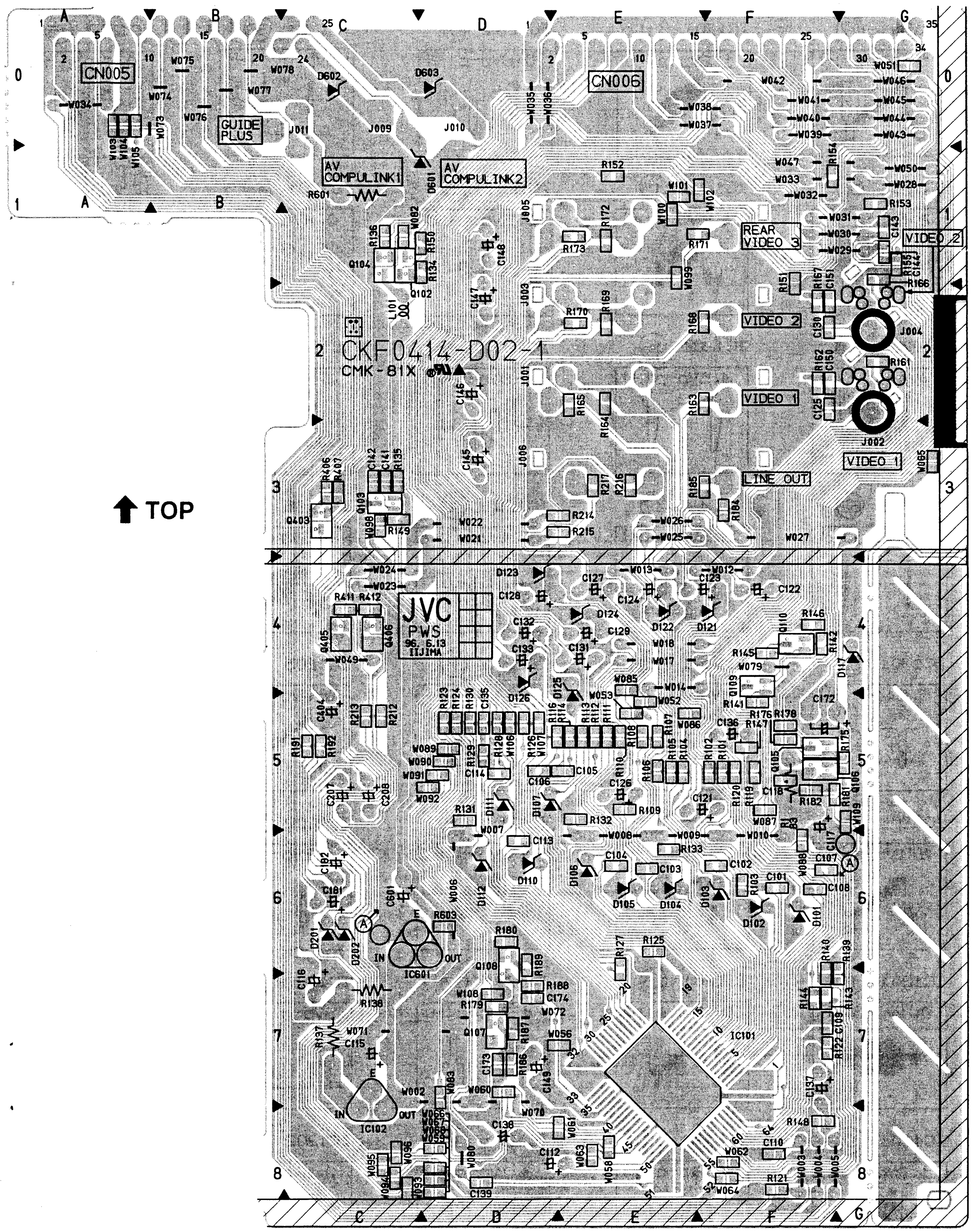
IC1201 ㉖


IC1201 ㊳


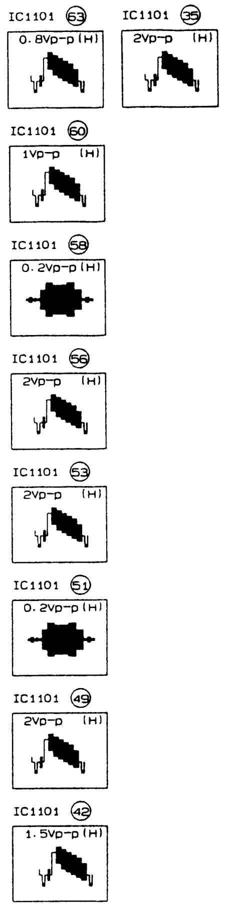
IC1202 ⑤


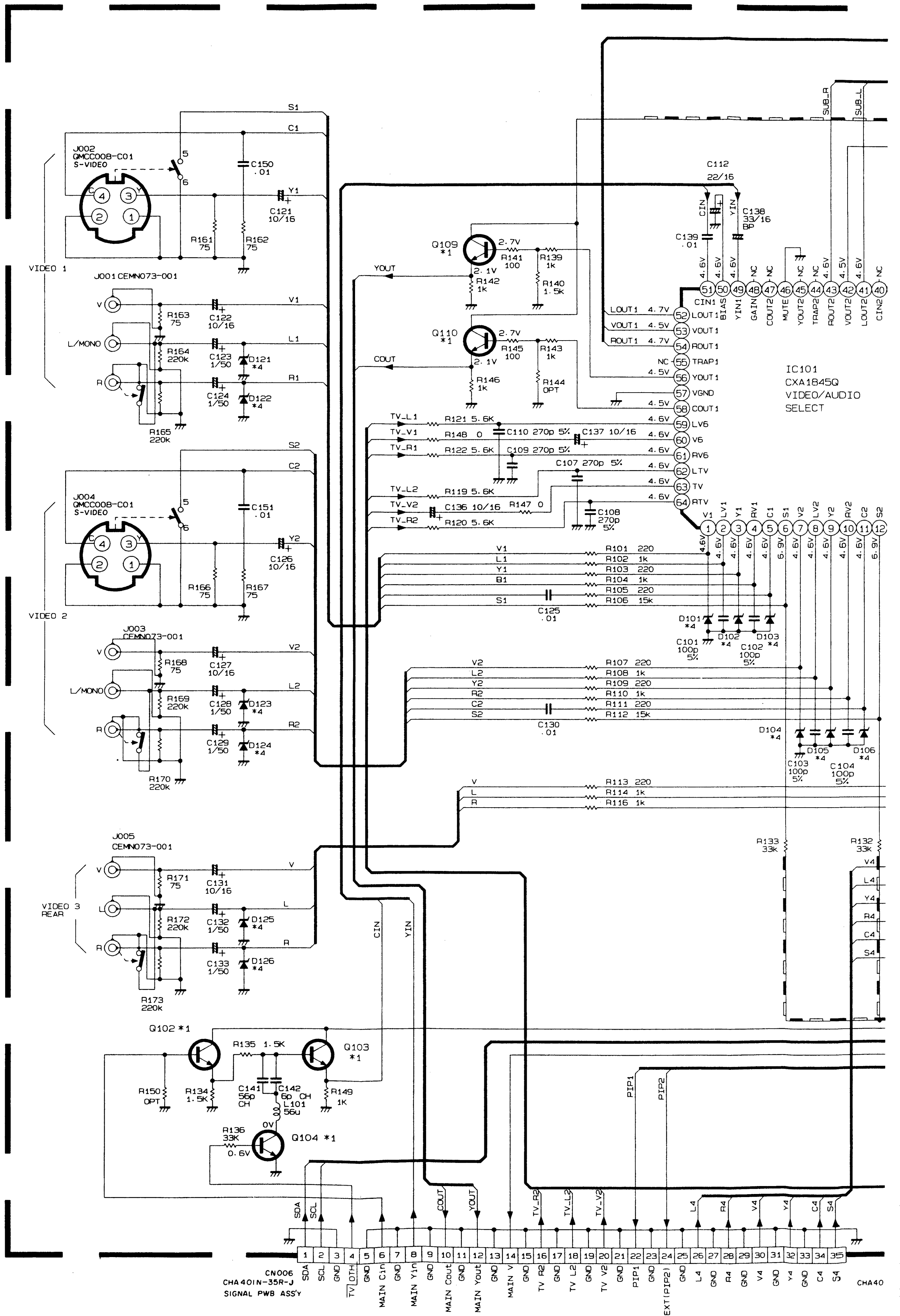
AV TERMINAL PWB PATTERN

(Magnification rate 103%)


CN005
CN006
GUIDE PLUS
AV COMPULINK1
AV COMPULINK2
REAR VIDEO 3
VIDEO 2
VIDEO 1
LINE OUT
CKF0414-D02-1
CMK-81X
JVC PWS 96. 6.13 IIJIMA
IC101
IC601
IC102
J002
J004
TOP
A B C D E F G
0 1 2 3 4 5 6 7 8

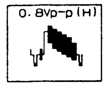
AV TERMINAL PWB CIRCUIT DIAGRAM


IC1101 (63) 0.8Vp-p (H)
IC1101 (35) 2Vp-p (H)
IC1101 (60) 1Vp-p (H)
IC1101 (58) 0.2Vp-p (H)
IC1101 (56) 2Vp-p (H)
IC1101 (53) 2Vp-p (H)
IC1101 (51) 0.2Vp-p (H)
IC1101 (49) 2Vp-p (H)
IC1101 (42) 1.5Vp-p (H)

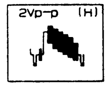

J002 QMCC008-C01 S-VIDEO
VIDEO 1
J001 CEMN073-001
J004 QMCC008-C01 S-VIDEO
VIDEO 2
J003 CEMN073-001
J005 CEMN073-001
VIDEO 3 REAR
V
L/MONO
R
L
Q109 *1
Q110 *1
Q102 *1
Q103 *1
Q104 *1
YOUT
COUT
CIN
YIN
IC101 CXA1845Q VIDEO/AUDIO SELECT
LOUT1 4.7V
VOUT1 4.5V
ROUT1 4.7V
C112 22/16
C138 33/16 BP
C139 .01
C150 .01
C121 10/16
C151 .01
C126 10/16
R161 75
R162 75
R166 75
R167 75
R141 100
R139 1k
R140 1.5k
R142 1k
R145 100
R143 1k
R146 1k
R144 OPT
R135 1.5K
R134 1.5K
R150 OPT
R149 1K
R136 33K
C141 56p CH
C142 68 CH
L101 56u
0V
0.6V
R101 220
R102 1k
R103 220
R104 1k
R105 220
R106 15k
R107 220
R108 1k
R109 220
R110 1k
R111 220
R112 15k
R113 220
R114 1k
R116 1k
R133 33k
R132 33k
C125 .01
C130 .01
TV_L1
TV_V1
TV_R1
TV_L2
TV_V2
TV_R2
PIP1
PIP2
CN006 CHA401N-35R-J SIGNAL PWB ASS'Y
1 SDA
2 SCL
3 GND
4 TV DTH
5 GND
6 GND
7 MAIN Cin
8 GND
9 MAIN Yin
10 GND
11 MAIN Cout
12 GND
13 MAIN Yout
14 GND
15 MAIN V
16 GND
17 TV R2
18 GND
19 TV L2
20 GND
21 TV V2
22 GND
23 PIP1
24 TEXT(PIP2)
25 GND
26 L4
27 GND
28 R4
29 GND
30 V4
31 GND
32 Y4
33 GND
34 C4
35 S4
CHA40

AV TERMINAL PWB CIRCUIT DIAGRAM

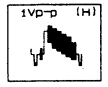
IC1101 (63)



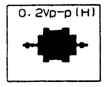
IC1101 (35)



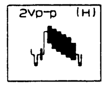
IC1101 (60)



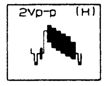
IC1101 (58)



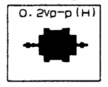
IC1101 (56)



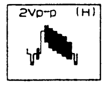
IC1101 (53)



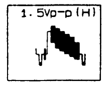
IC1101 (51)

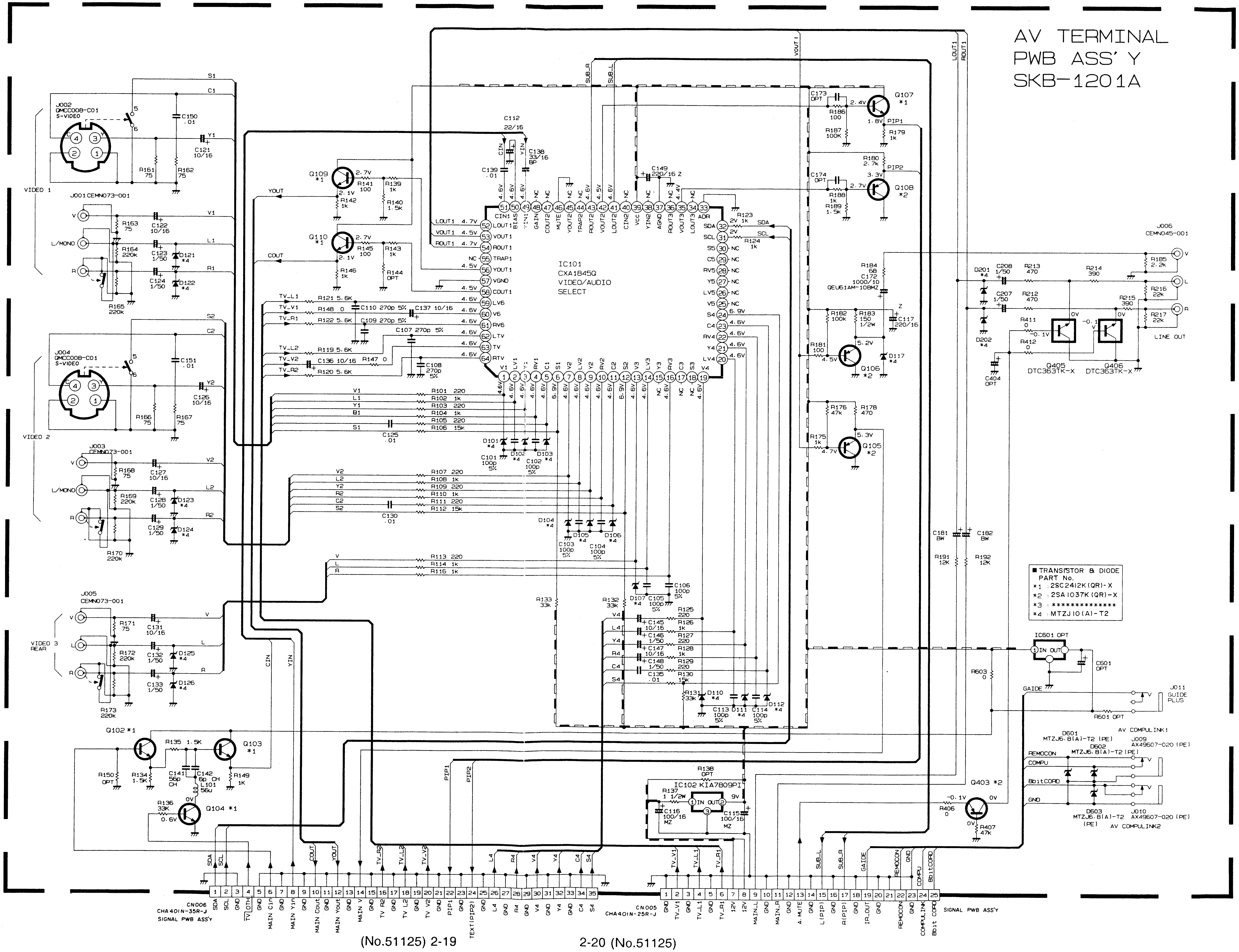


IC1101 (49)



IC1101 (42)



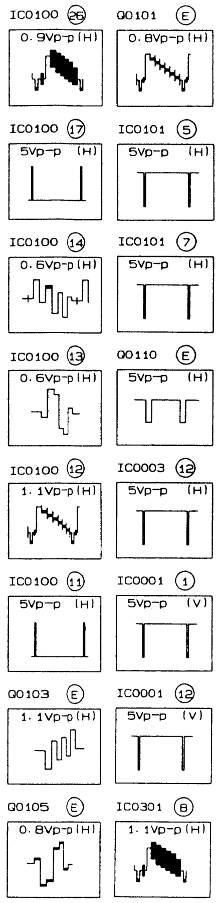

AV TERMINAL
PWB ASS' Y
SKB-1201A
IC101
CXA1845Q
VIDEO/AUDIO
SELECT
J002 QMCC008-C01 S-VIDEO
J004 QMCC008-C01 S-VIDEO
VIDEO 1
VIDEO 2
VIDEO 3 REAR
J001 CEMN073-001
J003 CEMN073-001
J005 CEMN073-001
V
L/MONO
R
S1
C1
Y1
V1
L1
R1
S2
C2
Y2
V2
L2
R2
C150 .01
C121 10/16
R161 75
R162 75
C151 .01
C126 10/16
R166 75
R167 75
R163 75
C122 10/16
R164 220k
C123 1/50
D121 *4
C124 1/50
D122 *4
R165 220k
R168 75
C127 10/16
R169 220k
C128 1/50
D123 *4
C129 1/50
D124 *4
R170 220k
R171 75
C131 10/16
R172 220k
C132 1/50
D125 *4
C133 1/50
D126 *4
R173 220k
Q109 *1
Q110 *1
YOUT
COUT
R141 100
R142 1k
R139 1k
R140 1.5k
R145 100
R143 1k
R144 OPT
R146 1k
2.7V
2.1V
C112 22/16
CIN
YIN
C138 33/16 BP
C139 .01
C149 220/16 Z
LOUT1 4.7V
VOUT1 4.5V
ROUT1 4.7V
TV_L1
TV_V1
TV_R1
TV_L2
TV_V2
TV_R2
R121 5.6K
R148 0
R122 5.6K
C110 270p 5%
C109 270p 5%
C137 10/16
C107 270p 5%
R119 5.6K
C136 10/16
R147 0
R120 5.6K
C108 270p 5%
R101 220
R102 1k
R103 220
R104 1k
R105 220
R106 15k
C125 .01
D101 *4
D102 *4
D103 *4
C101 100p 5%
C102 100p 5%
R107 220
R108 1k
R109 220
R110 1k
R111 220
R112 15k
C130 .01
D104 *4
D105 *4
D106 *4
C103 100p 5%
C104 100p 5%
V
L
R
R113 220
R114 1k
R116 1k
R133 33k
R132 33k
D107 *4
C105 100p 5%
C106 100p 5%
V4
L4
Y4
R4
C4
S4
C145 10/16
C146 1/50
C147 10/16
C148 1/50
C135 .01
R125 220
R126 1k
R127 220
R128 1k
R129 220
R130 15k
R131 33k
D110 *4
D111 *4
D112 *4
C113 100p 5%
C114 100p 5%
LOUT1
VOUT1
ROUT1
TRAP1
COUT1
VGND
LV6
V6
RV6
LTV
TV
RTV
CIN1
BIAS
YIN1
GAIN
COUT2
MUTE
YOUT2
TRAP2
ROUT2
VOUT2
LOUT2
CIN2
Vcc
YIN2
AGND
ROUT3
VOUT3
LOUT3
ADR
SDA
SCL
S5
C5
RV5
Y5
LV5
V5
S4
C4
RV4
Y4
LV4
R123 1k
R124 1k
SUB_R
SUB_L
VOUT1
LOUT1
ROUT1
C173 OPT
R186 100
R187 100K
R179 1k
Q107 *1
PIP1
PIP2
R180 2.7k
C174 OPT
R188 1k
R189 1.5k
Q108 *2
R184 68
C172 1000/10
QEU61AM-108MZ
R182 100k
R183 150 1/2W
C117 220/16
R181 100
Q106 *2
D117 *4
R176 47k
R178 470
R175 1k
Q105 *2
5.2V
5.3V
4.5V
4.7V
C181 BW
C182 BW
R191 12K
R192 12K
J006 CEMN045-001
D201 *4
C208 1/50
R213 470
R214 390
R185 2.2k
C207 1/50
R212 470
R215 390
R216 22k
R217 22k
D202 *4
R411 0
R412 0
C404 OPT
Q405 DTC363TK-X
Q406 DTC363TK-X
LINE OUT
IC601 OPT
IN OUT
C601 OPT
R603 0
GAIDE
J011 GUIDE PLUS
R601 OPT
D601 MTZJ6.8(A)-T2 (PE)
D602 MTZJ6.8(A)-T2 (PE)
D603 MTZJ6.8(A)-T2 (PE)
AV COMPULINK1
J009 AX49607-020 (PE)
J010 AX49607-020 (PE)
AV COMPULINK2
REMOCON
COMPU
8bitCORD
GND
Q403 *2
R406 0
R407 47k
-0.1V
0V
Q102 *1
Q103 *1
R135 1.5K
R150 OPT
R134 1.5K
C141 56p CH
C142 68 CH
L101 56μ
R149 1K
R136 33K
Q104 *1
0.6V
CIN
YIN
PIP1
PIP2
R138 OPT
IC102 KIA7809PI
R137 1 1/2W
C116 100/16 MZ
C115 100/16 MZ
9V
CN006
CHA40IN-35R-J
SIGNAL PWB ASS'Y
1 SDA
2 SCL
3 GND
4 TV OTH
5 GND
6 MAIN Cin
7 GND
8 MAIN Yin
9 GND
10 MAIN Cout
11 GND
12 MAIN Yout
13 GND
14 MAIN V
15 GND
16 TV R2
17 GND
18 TV L2
19 GND
20 TV V2
21 GND
22 PIP1
23 GND
24 TEXT(PIP2)
25 GND
26 L4
27 GND
28 R4
29 GND
30 V4
31 GND
32 Y4
33 GND
34 C4
35 S4
CN005
CHA40IN-25R-J
1 GND
2 TV_V1
3 GND
4 TV_L1
5 GND
6 TV_R1
7 12V
8 12V
9 MAIN_L
10 GND
11 MAIN_R
12 GND
13 A.MUTE
14 GND
15 L(PIP)
16 GND
17 R(PIP)
18 GND
19 IR_OUT
20 GND
21
22 REMOCON
23 GND
24 COMPULINK
25 8bit CORD
SIGNAL PWB ASS'Y

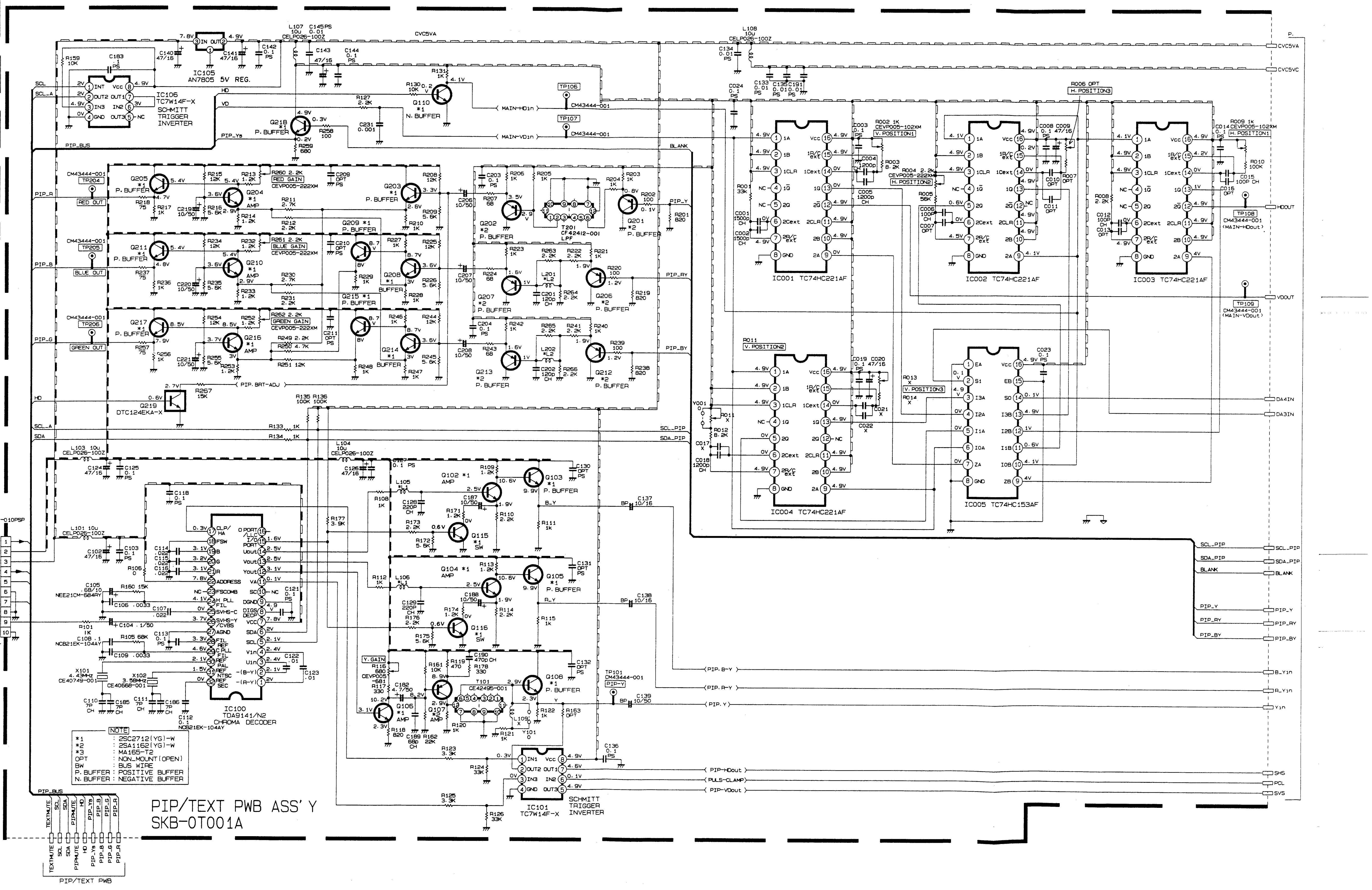
■ TRANSISTOR & DIODE PART No.

*1 : 2SC2412K(QR)-X
*2 : 2SA1037K(QR)-X
*3 : ***************
*4 : MTZJ10(A)-T2

PIP / TEXT PWB CIRCUIT DIAGRAMS - 1/3

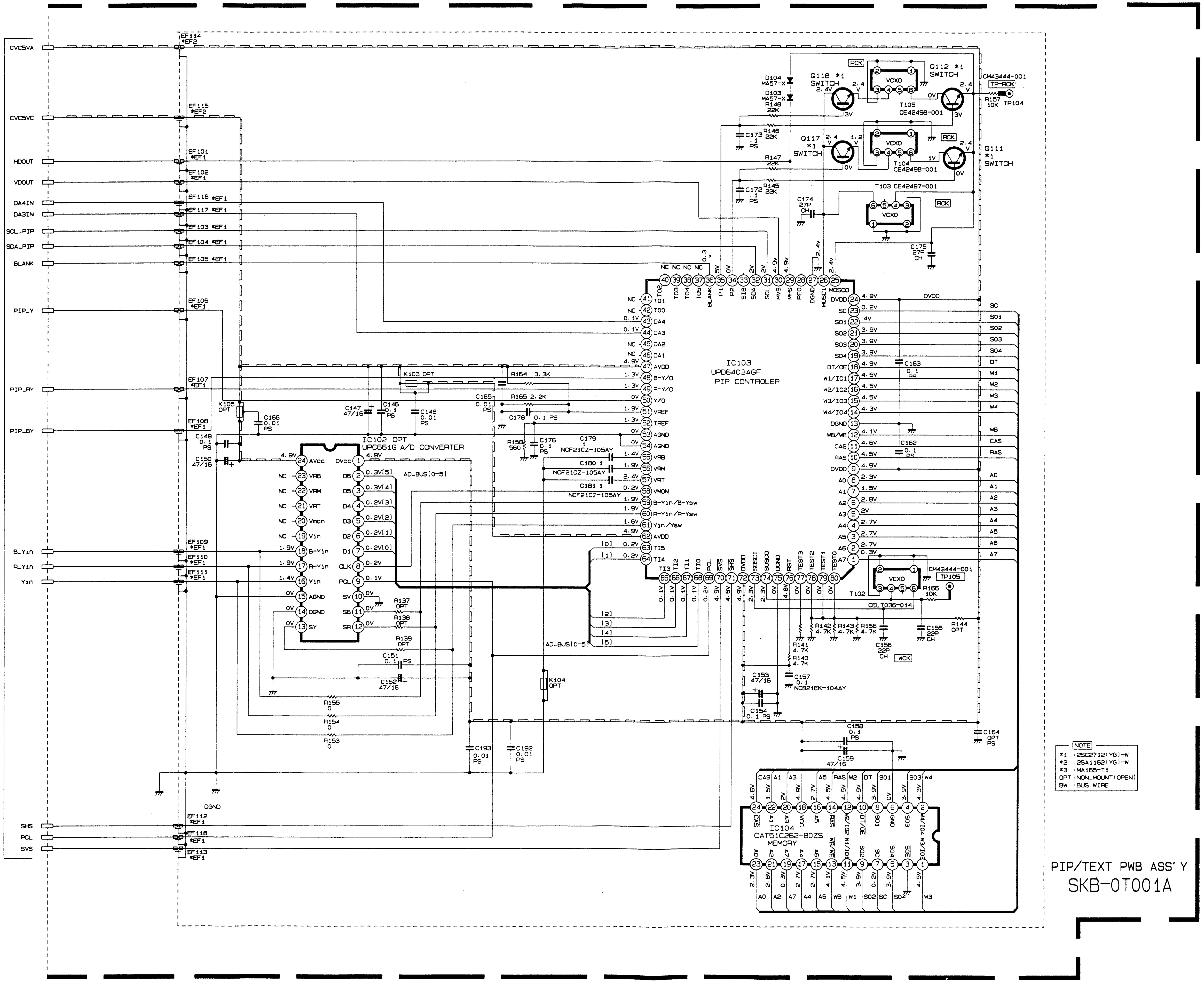
Refer to the following PWB pattern. : PIP / TEXT PWB PATTERN 2-27page and 2-29page




IC105 AN7805 5V REG.
IC106 TC7W14F-X SCHMITT TRIGGER INVERTER
Q110 *1 N. BUFFER
Q218 *1 P. BUFFER
TP106 CM43444-001 MAIN-HDin
TP107 CM43444-001 MAIN-VDin
TP204 RED OUT
TP205 BLUE OUT
TP206 GREEN OUT
Q205 *1 P. BUFFER
Q204 *1 AMP
Q203 *1 P. BUFFER
Q209 *1 P. BUFFER
R260 2.2K RED GAIN CEVP005-222XM
Q211 *1 P. BUFFER
Q210 *1 AMP
Q208 *1 BUFFER
Q215 *1 P. BUFFER
R261 2.2K BLUE GAIN CEVP005-222XM
Q217 *1 P. BUFFER
Q216 *1 AMP
Q214 *1 BUFFER
R262 2.2K GREEN GAIN CEVP005-222XM
Q202 *2 P. BUFFER
Q201 *2 P. BUFFER
T201 CF42412-001 LPF
Q207 *2 P. BUFFER
Q206 *2 P. BUFFER
Q213 *2 P. BUFFER
Q212 *2 P. BUFFER
Q219 DTC124EKA-X
PIP.BRT-ADJ
PIP_Y PIP_RY PIP_BY BLANK SCL_PIP SDA_PIP
IC001 TC74HC221AF
IC002 TC74HC221AF
IC003 TC74HC221AF
IC004 TC74HC221AF
IC005 TC74HC153AF
R002 1K CEVP005-102XM V. POSITION1
R004 2.2K CEVP005-222XM H. POSITION2
R006 OPT H. POSITION3
R009 1K CEVP005-102XM H. POSITION1
R011 V. POSITION2
R013 X V. POSITION3
TP108 CM43444-001 (MAIN-HDout)
TP109 CM43444-001 (MAIN-VDout)
CVC5VA CVC5VC HDOUT VDOUT DA4IN DA3IN
SCL_PIP SDA_PIP BLANK PIP_Y PIP_RY PIP_BY B_Yin R_Yin Yin SHS PCL SVS
CN004 CH42151-010PSP
PIPMUTE CVC12VA CVCBVA TEXTMUTE HD GND VD GND VD1P GND
SIGNAL PWB ASS'Y
IC100 TDA9141/N2 CHROMA DECODER
X101 4.43MHz CE40749-001
X102 3.58MHz CE40668-001
Q102 *1 AMP
Q103 *1 P. BUFFER
Q115 *1 SW
Q104 *1 AMP
Q105 *1 P. BUFFER
Q116 *1 SW
Y.GAIN
Q106 *1 AMP
Q107 *1 AMP
Q108 *1 P. BUFFER
T101 CE42495-001
TP101 CM43444-001 PIP-Y
IC101 TC7W14F-X SCHMITT TRIGGER INVERTER
PIP-HDout PULS-CLAMP PIP-VDout
(PIP.B-Y) (PIP.R-Y) (PIP.Y)
NOTE
*1 : 2SC2712(YG)-W
*2 : 2SA1162(YG)-W
*3 : MA165-T2
OPT : NON_MOUNT(OPEN)
BW : BUS WIRE
P.BUFFER : POSITIVE BUFFER
N.BUFFER : NEGATIVE BUFFER
PIP_BUS
TEXTMUTE SCL SDA PIPMUTE HD PIP_Ys PIP_B PIP_G PIP_R
PIP/TEXT PWB
PIP/TEXT PWB ASS'Y SKB-0T001A

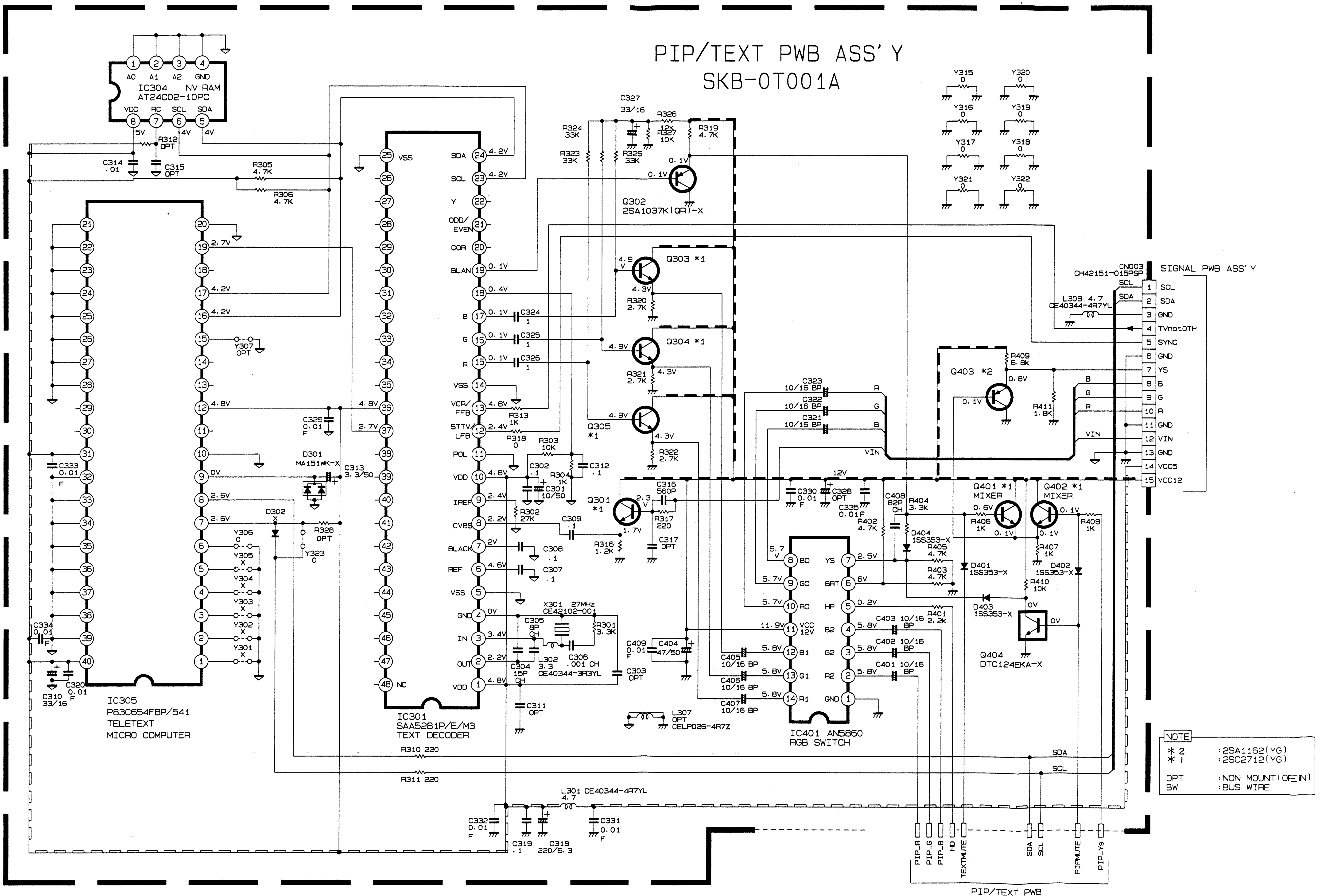
PIP / TEXT PWB CIRCUIT DIAGRAMS - 2/3

Refer to the following PWB pattern. : PIP / TEXT PWB PATTERN 2-27page and 2-29page


CVC5VA
CVC5VC
HDOUT
VDOUT
DA4IN
DA3IN
SCL_PIP
SDA_PIP
BLANK
PIP_Y
PIP_RY
PIP_BY
B_Yin
R_Yin
Yin
SHS
PCL
SVS
DGND
IC103
UPD6403AGF
PIP CONTROLER
IC102 OPT
UPC661G A/D CONVERTER
AD_BUS[0-5]
IC104
CAT51C262-80ZS
MEMORY
Q118 *1 SWITCH
Q112 *1 SWITCH
Q117 *1 SWITCH
Q111 *1 SWITCH
T105 CE42498-001
T104 CE42498-001
T103 CE42497-001
T102 CELT036-014
VCXO
TP104
TP105
CM43444-001
TP-RCK
RCK
WCK
D104 MA57-X
D103 MA57-X
NOTE
*1 :2SC2712(YG)-W
*2 :2SA1162(YG)-W
*3 :MA165-T1
OPT :NON_MOUNT(OPEN)
BW :BUS WIRE
PIP/TEXT PWB ASS' Y
SKB-0T001A

PIP / TEXT PWB CIRCUIT DIAGRAMS - 3/3

Refer to the following PWB pattern. : PIP / TEXT PWB PATTERN 2-27page and 2-29page

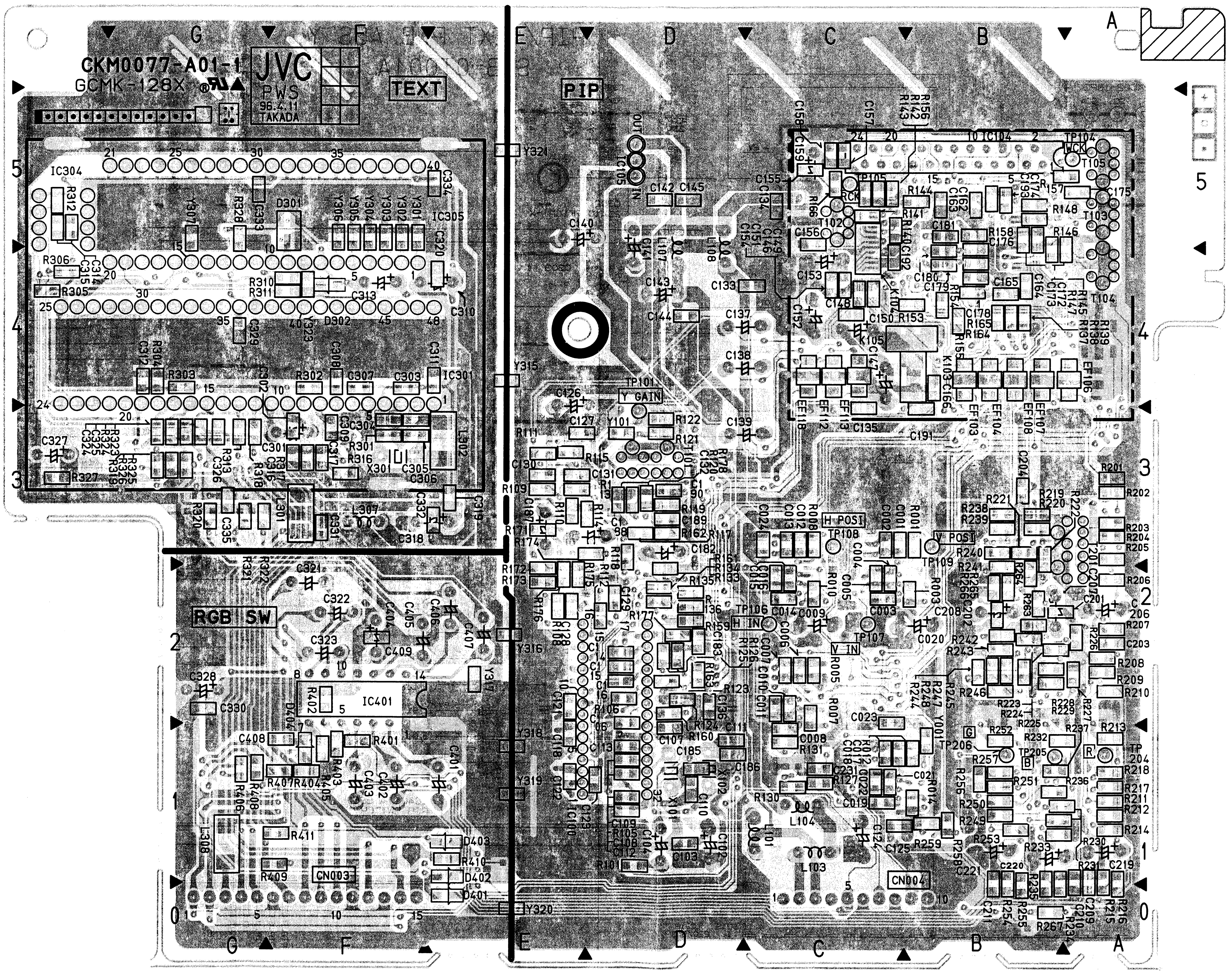

PIP/TEXT PWB ASS' Y
SKB-0T001A
IC304 NV RAM
AT24C02-10PC
A0 A1 A2 GND
VDD RC SCL SDA
IC305
P83C654FBP/541
TELETEXT
MICRO COMPUTER
IC301
SAA5281P/E/M3
TEXT DECODER
IC401 AN5860
RGB SWITCH
Q302
2SA1037K(QR)-X
Q303 *1
Q304 *1
Q305 *1
Q301 *1
Q403 *2
Q401 *1 MIXER
Q402 *1 MIXER
Q404
DTC124EKA-X
D301 MA151WK-X
D401 1SS353-X
D402 1SS353-X
D403 1SS353-X
D404 1SS353-X
X301 27MHz CE42102-001
L301 CE40344-4R7YL 4.7
L302 3.3 CE40344-3R3YL
L307 OPT CELP026-4R7Z
L308 4.7 CE40344-4R7YL
CN003 CH42151-015PSP
SIGNAL PWB ASS' Y
1 SCL
2 SDA
3 GND
4 TVnotOTH
5 SYNC
6 GND
7 YS
8 B
9 G
10 R
11 GND
12 VIN
13 GND
14 VCC5
15 VCC12
PIP_R PIP_G PIP_B HD TEXTMUTE SDA SCL PIPMUTE PIP_Ys
PIP/TEXT PWB
NOTE
*2 :2SA1162(YG)
*1 :2SC2712(YG)
OPT :NON MOUNT(OPEN)
BW :BUS WIRE

PIP / TEXT PWB PATTERN [A (PARTS) SIDE] (SKB-0T001A)

(Magnification rate 160%)

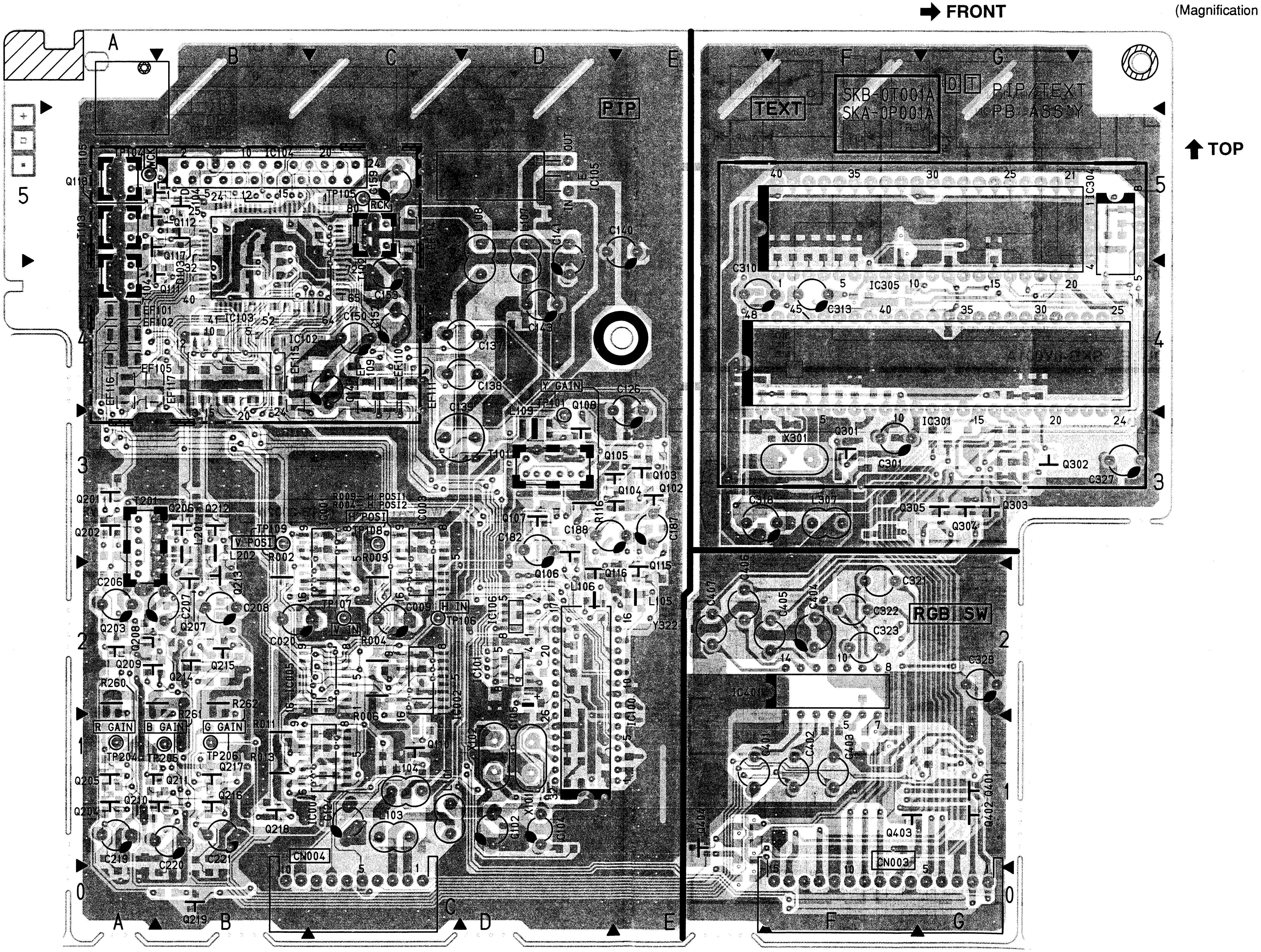
← FRONT

↑ TOP

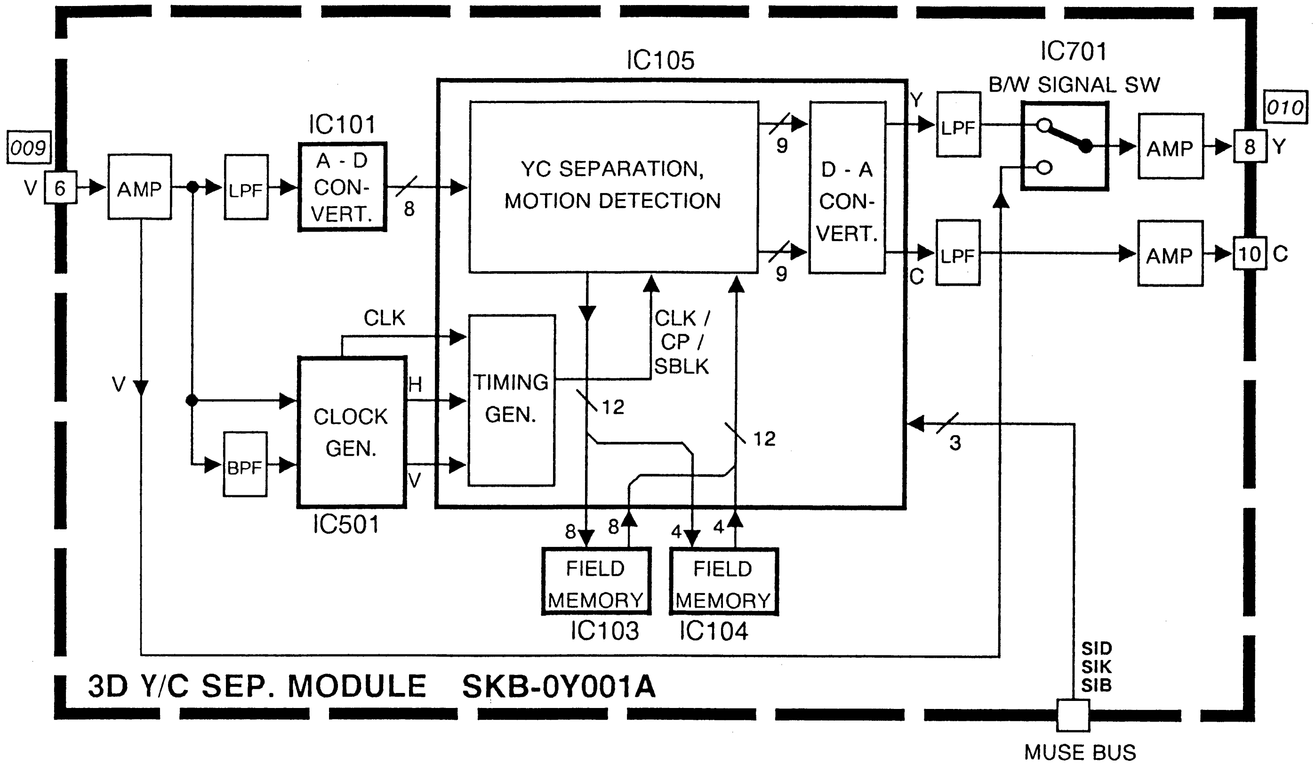

CKM0077-A01-1
GCMK-128X
JVC
PWS
96.4.11
TAKADA
TEXT
PIP
RGB SW
IC304
IC305
IC301
IC401
IC104
CN003
CN004
Y GAIN
H POS
V POS
H IN
V IN
TP101
TP104
TP105
TP106
TP107
TP108
TP109
WCK
RCK
A
B
C
D
E
F
G
0
1
2
3
4
5

PIP / TEXT PWB PATTERN [B (SOLDER) SIDE] (SKB-0T001A)

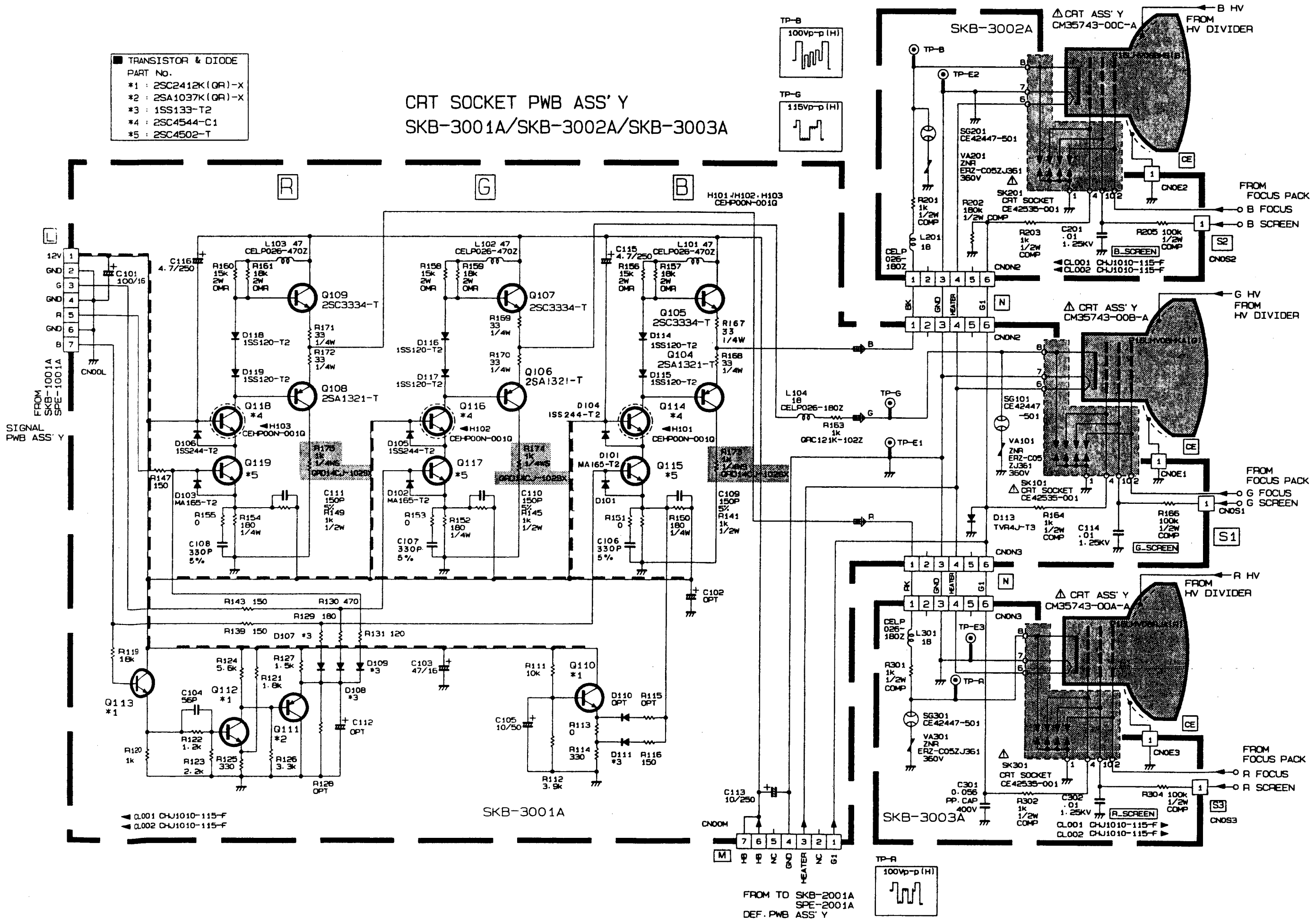
(Magnification rate 160%)


FRONT
TOP
A
B
C
D
E
F
G
0
1
2
3
4
5
PIP
TEXT
SKB-0T001A
SKA-0P001A
PIP/TEXT
PB ASS'Y
RGB SW
Y GAIN
R GAIN
B GAIN
G GAIN
V POSI
H POSI
H IN
V IN
CN004
CN003
IC101
IC102
IC103
IC301
IC304
IC305
IC401
T101
T201
X101
X301
TP101
TP104
TP105
TP106
TP107
TP108
TP109
TP204
TP205
TP206
MCK
RCK
IN
OUT

3D Y/C SEP. MODULE BLOCK DIAGRAM

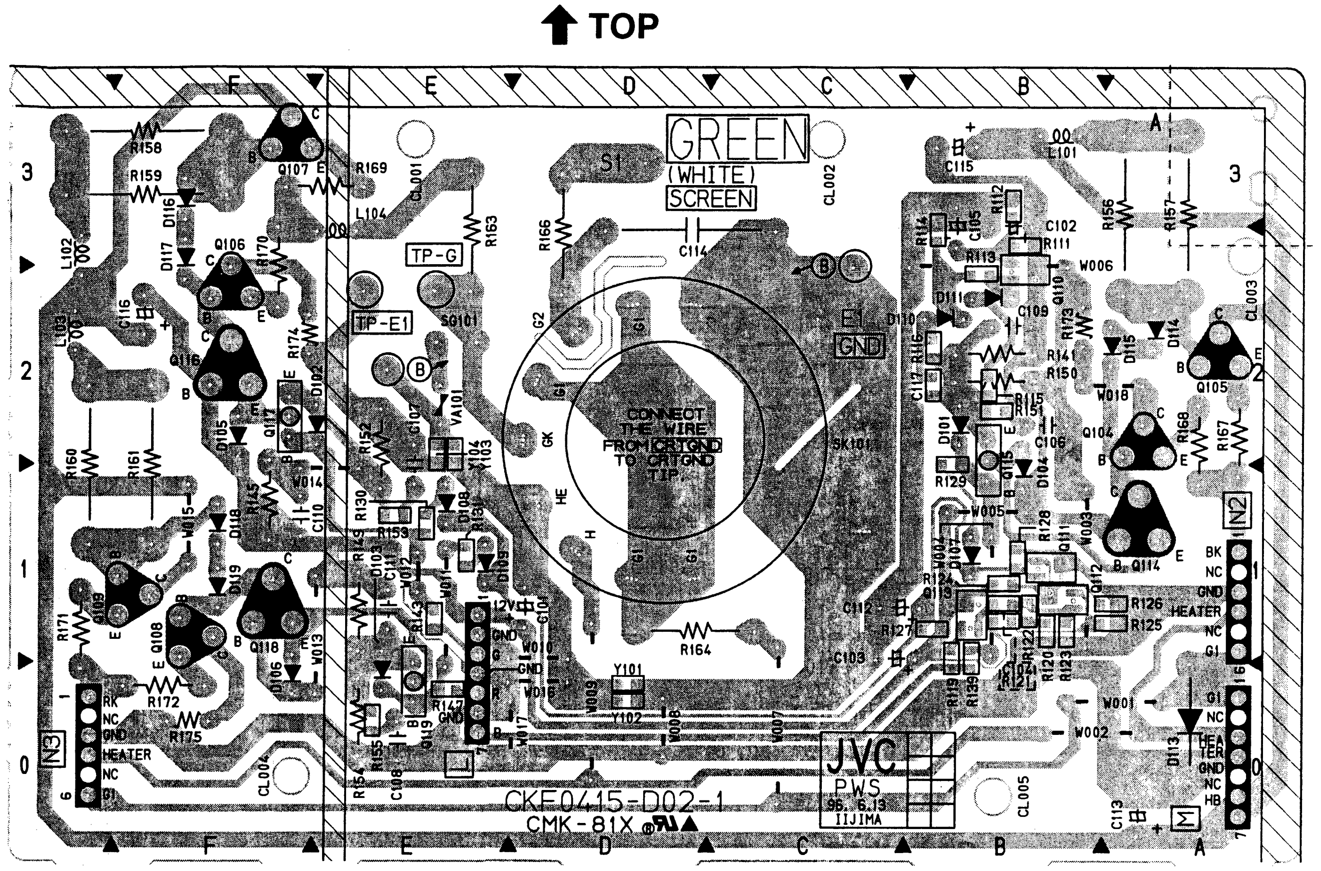

009
V
6
AMP
LPF
IC101
A - D CON- VERT.
8
IC105
YC SEPARATION, MOTION DETECTION
9
D - A CON- VERT.
Y
C
LPF
IC701
B/W SIGNAL SW
AMP
010
8
Y
10
C
CLK
CLK / CP / SBLK
H
V
CLOCK GEN.
BPF
IC501
TIMING GEN.
12
3
FIELD MEMORY
IC103
IC104
4
SID
SIK
SIB
MUSE BUS
3D Y/C SEP. MODULE SKB-0Y001A

CRT SOCKET PWB CIRCUIT DIAGRAM


TRANSISTOR & DIODE
CRT SOCKET PWB ASS'Y
SKB-3001A/SKB-3002A/SKB-3003A
R
G
B
SKB-3001A
SKB-3002A
SKB-3003A
FROM HV DIVIDER
FROM FOCUS PACK
B FOCUS
B SCREEN
G FOCUS
G SCREEN
R FOCUS
R SCREEN
B HV
G HV
R HV
SIGNAL PWB ASS'Y
FROM TO SKB-2001A SPE-2001A DEF. PWB ASS'Y
TP-B
TP-G
TP-R
100Vp-p (H)

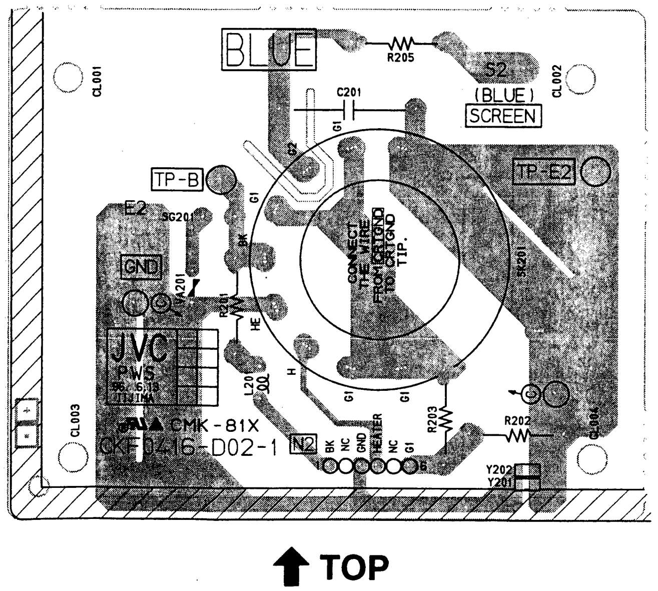
G CRT SOCKET PWB PATTERN (SKB-3001A)

(Magnification rate 110%)


TOP
GREEN
(WHITE)
SCREEN
TP-G
TP-E1
GND
CONNECT THE WIRE FROM CRTGND TO CRTGND TIP.
JVC
PWS
CKF0415-D02-1
CMK-81X
A
B
C
D
E
F
N2
N3
M
BK
NC
GND
HEATER
G1

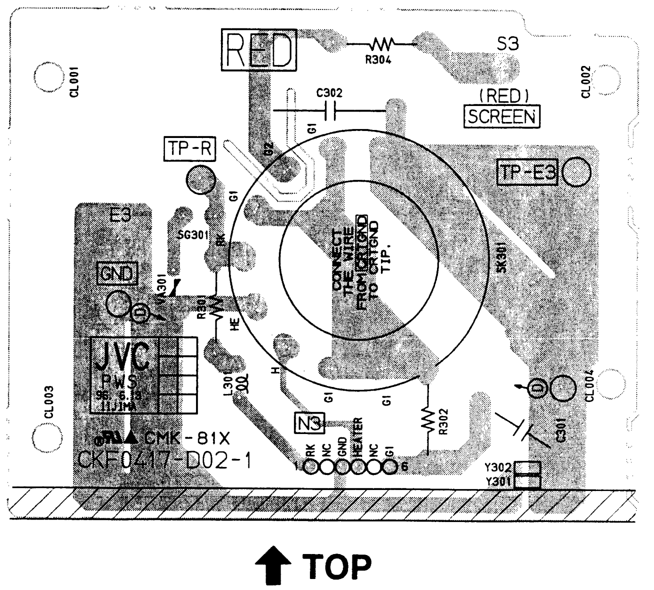
B CRT SOCKET PWB PATTERN (SKB-3002A)

(Magnification rate 84%)


BLUE
S2
(BLUE)
SCREEN
TP-B
TP-E2
GND
CONNECT THE WIRE FROM CRTGND TO CRTGND TIP.
JVC
CMK-81X
CKF0416-D02-1
N2
TOP

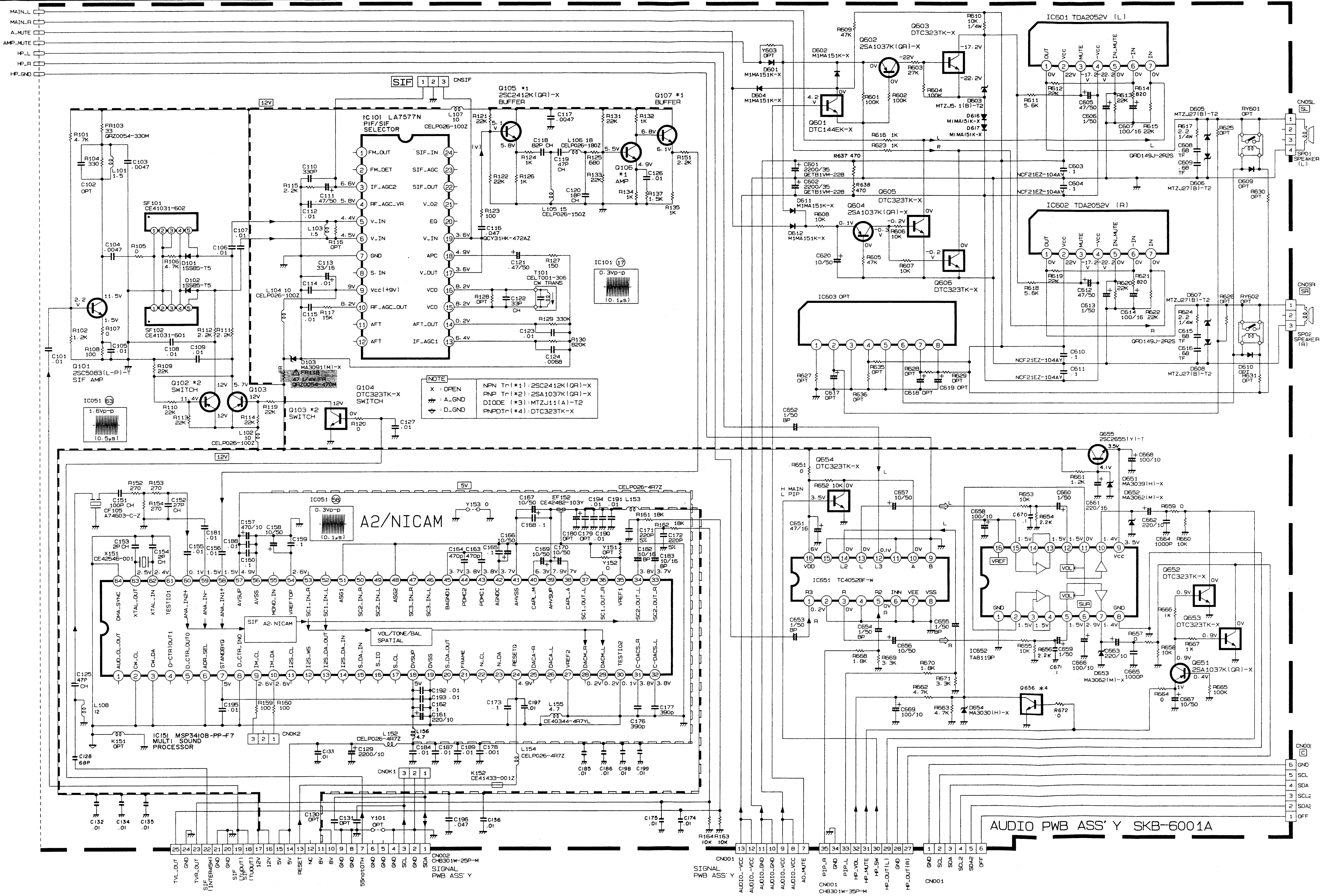
R CRT SOCKET PWB PATTERN (SKB-3003A)

(Magnification rate 84%)


RED
S3
(RED)
SCREEN
TP-R
TP-E3
GND
CONNECT THE WIRE FROM CRTGND TO CRTGND TIP.
JVC
CMK-81X
CKF0417-D02-1
N3
TOP

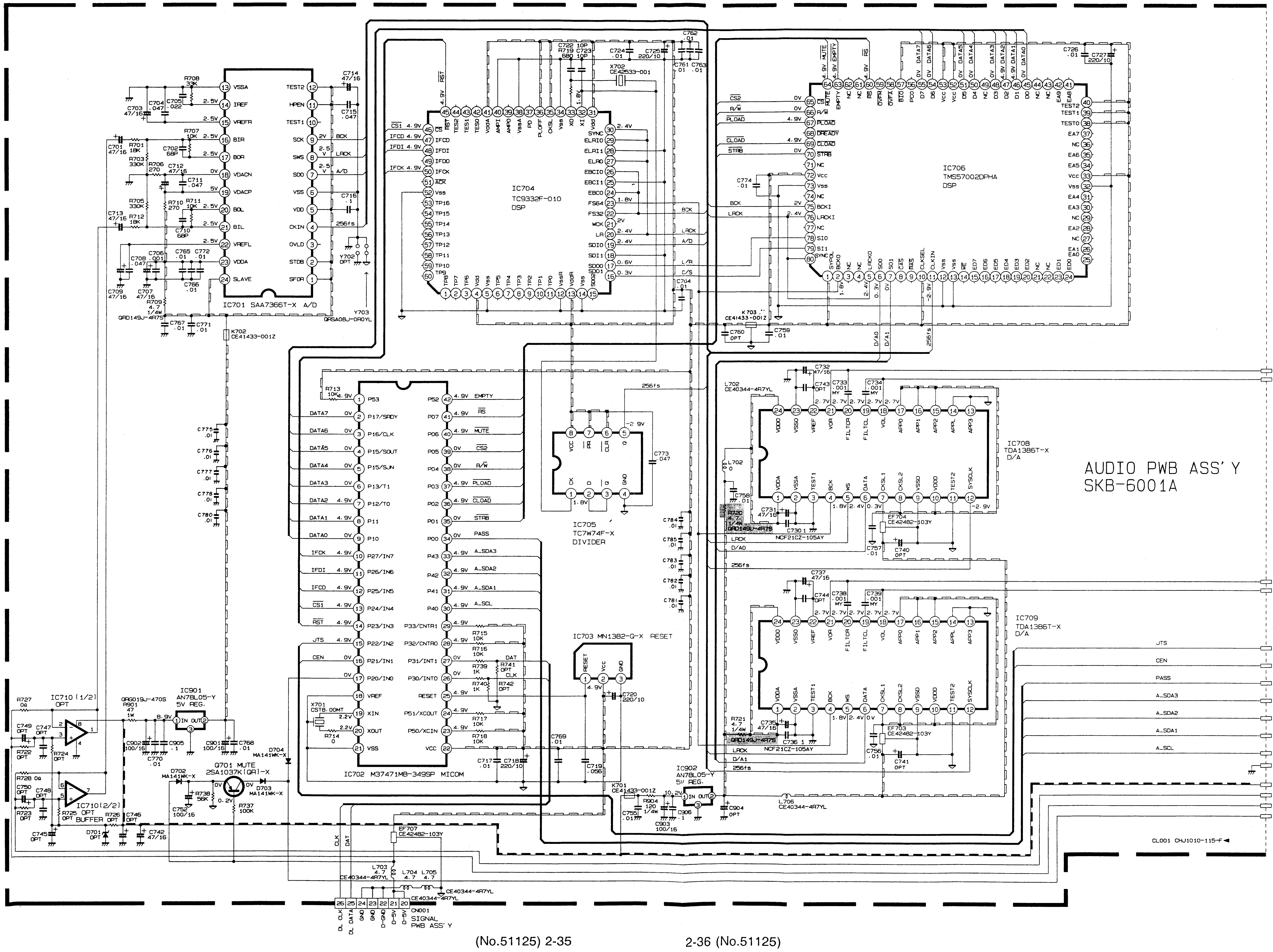
AUDIO PWB CIRCUIT DIAGRAMS - 1/3

Refer to the following PWB pattern. : AUDIO PWB PATTERN 2-39page and 2-41page


MAIN_L
MAIN_R
A_MUTE
AMP_MUTE
HP_L
HP_R
HP_GND
SIF
CNSIF
12V
IC101 LA7577N
PIF/SIF SELECTOR
FM_OUT
FM_DET
IF_AGC2
RF_AGC_VR
V_IN
GND
S.IN
Vcc(+9V)
RF_AGC_OUT
AFT
SIF_IN
SIF_AGC
SIF_OUT
V_02
EQ
APC
V_OUT
VCO
AFT_OUT
IF_AGC1
Q105 *1
2SC2412K(QR)-X
BUFFER
Q106 *1
AMP
Q107 *1
BUFFER
SF101
CE41031-602
SF102
CE41031-601
Q101
2SC5083(L-P)-T
SIF AMP
Q102 *2
SWITCH
Q103
Q103 *2
SWITCH
Q104
DTC323TK-X
SWITCH
IC051 (63)
1.6Vp-p
(0.5μs)
IC101 (17)
0.3Vp-p
(0.1μs)
T101
CELT001-306
CW TRANS
D103
MA3091(M)-X
FR118
47 1/4W FR
QRZ0054-470M
NOTE
X : OPEN
A_GND
D_GND
NPN Tr(*1):2SC2412K(QR)-X
PNP Tr(*2):2SA1037K(QR)-X
DIODE (*3):MTZJ11(A)-T2
PNPDTr(*4):DTC323TK-X
IC051 (56)
0.3Vp-p
(0.1μs)
A2/NICAM
5V
X151
CE42546-001
CF105
A74603-C-Z
IC151 MSP3410B-PP-F7
MULTI SOUND PROCESSOR
SIF A2·NICAM
VOL/TONE/BAL SPATIAL
CNOK2
CNOK1
K151
OPT
K152
CE41433-001Z
Y101
Y151
Y152
Y153
CN002
CHB301W-25P-M
SIGNAL PWB ASS'Y
TVL_OUT
GND
TVR_OUT
SIF (INTER45M)
SIF (TVOUT)
12V
5V
RESET
NC
8V
55mOTH
SCL
SDA
IC601 TDA2052V (L)
IC602 TDA2052V (R)
OUT
Vcc
MUTE
-Vcc
IN_MUTE
-IN
IN
IC603 OPT
Q601
DTC144EK-X
Q602
2SA1037K(QR)-X
Q603
DTC323TK-X
Q604
2SA1037K(QR)-X
Q605
DTC323TK-X
Q606
DTC323TK-X
D601
M1MA151K-X
D602
M1MA151K-X
D604
M1MA151K-X
D611
M1MA151K-X
D612
M1MA151K-X
D603
MTZJ5.1(B)-T2
D616
M1MA151K-X
D617
M1MA151K-X
Y603
OPT
RY601
RY602
QRD149J-2R2S
NCF21EZ-104A
MTZJ27(B)-T2
CN0SL
SL
SP01
SPEAKER
(L)
CN0SR
SR
SP02
SPEAKER
(R)
Q651
2SA1037K(QR)-X
Q652
DTC323TK-X
Q653
DTC323TK-X
Q654
DTC323TK-X
Q655
2SC2655(Y)-T
Q656 *4
IC651 TC4052BF-W
IC652 TA8119P
VREF
VOL
SUR
H MAIN
L PIP
CN001
SIGNAL PWB ASS'Y
AUDIO_-VCC
AUDIO_GND
AUDIO_VCC
AO_MUTE
PIP_R
PIP_L
HP_VOL
HP_MUTE
HP_SW
HP_OUT(L)
HP_OUT(R)
CHB301W-35P-M
CN00
C
GND
SCL
SDA
SCL2
SDA2
OFF
AUDIO PWB ASS'Y SKB-6001A

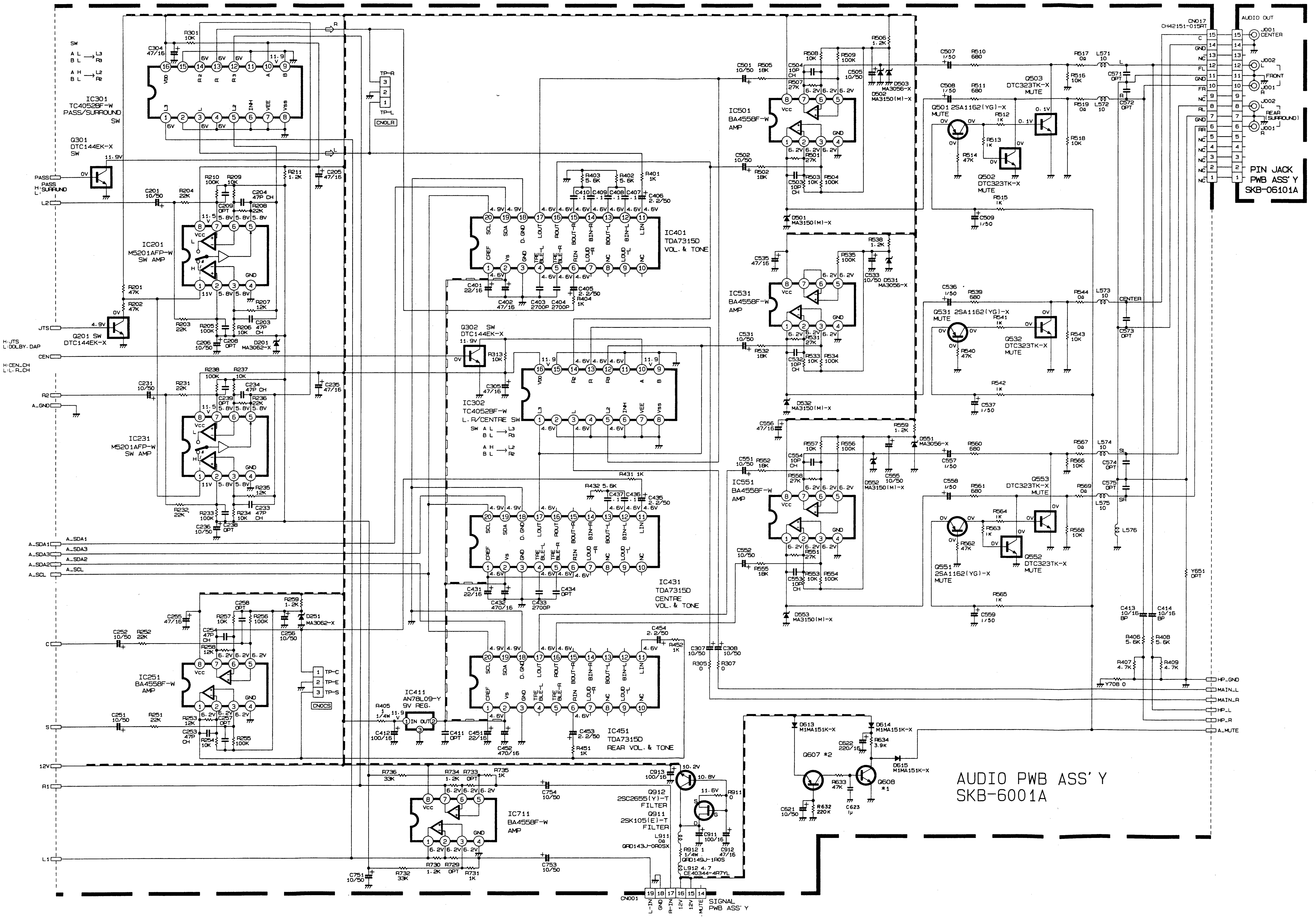
AUDIO PWB CIRCUIT DIAGRAMS - 2/3

Refer to the following PWB pattern. : AUDIO PWB PATTERN 2-39page and 2-41page


AUDIO PWB ASS'Y
SKB-6001A
IC701 SAA7366T-X A/D
IC704 TC9332F-010 DSP
IC706 TMS57002DPHA DSP
IC702 M37471M8-349SP MICOM
IC705 TC7W74F-X DIVIDER
IC703 MN1382-Q-X RESET
IC708 TDA1386T-X D/A
IC709 TDA1386T-X D/A
IC710(1/2) OPT
IC710(2/2) OPT BUFFER
IC901 AN78L05-Y 5V REG.
IC902 AN78L05-Y 5V REG.
Q701 MUTE 2SA1037K(QR)-X
X701 CST8.00MT
X702 CE42533-001
Y702 OPT
Y703 QRSA08J-0R0YL
K701 CE41433-001Z
K702 CE41433-001Z
K703 CE41433-001Z
L702 CE40344-4R7YL
L706 CE40344-4R7YL
EF703 CE42482-103Y
EF704 CE42482-103Y
EF707 CE42482-103Y
D701 OPT
D702 MA141WK-X
D703 MA141WK-X
D704 MA141WK-X
R2
L2
S
C
JTS
CEN
PASS
A_SDA3
A_SDA2
A_SDA1
A_SCL
A_GND
12V
R1
L1
AMP_MUTE
CL001 CHJ1010-115-F
CN001 SIGNAL PWB ASS'Y
DL CLK
DL DATA
GND
GND
D-GND
D-5V
D-5V

AUDIO PWB CIRCUIT DIAGRAMS - 3/3

Refer to the following PWB pattern. : AUDIO PWB PATTERN 2-39page and 2-41page



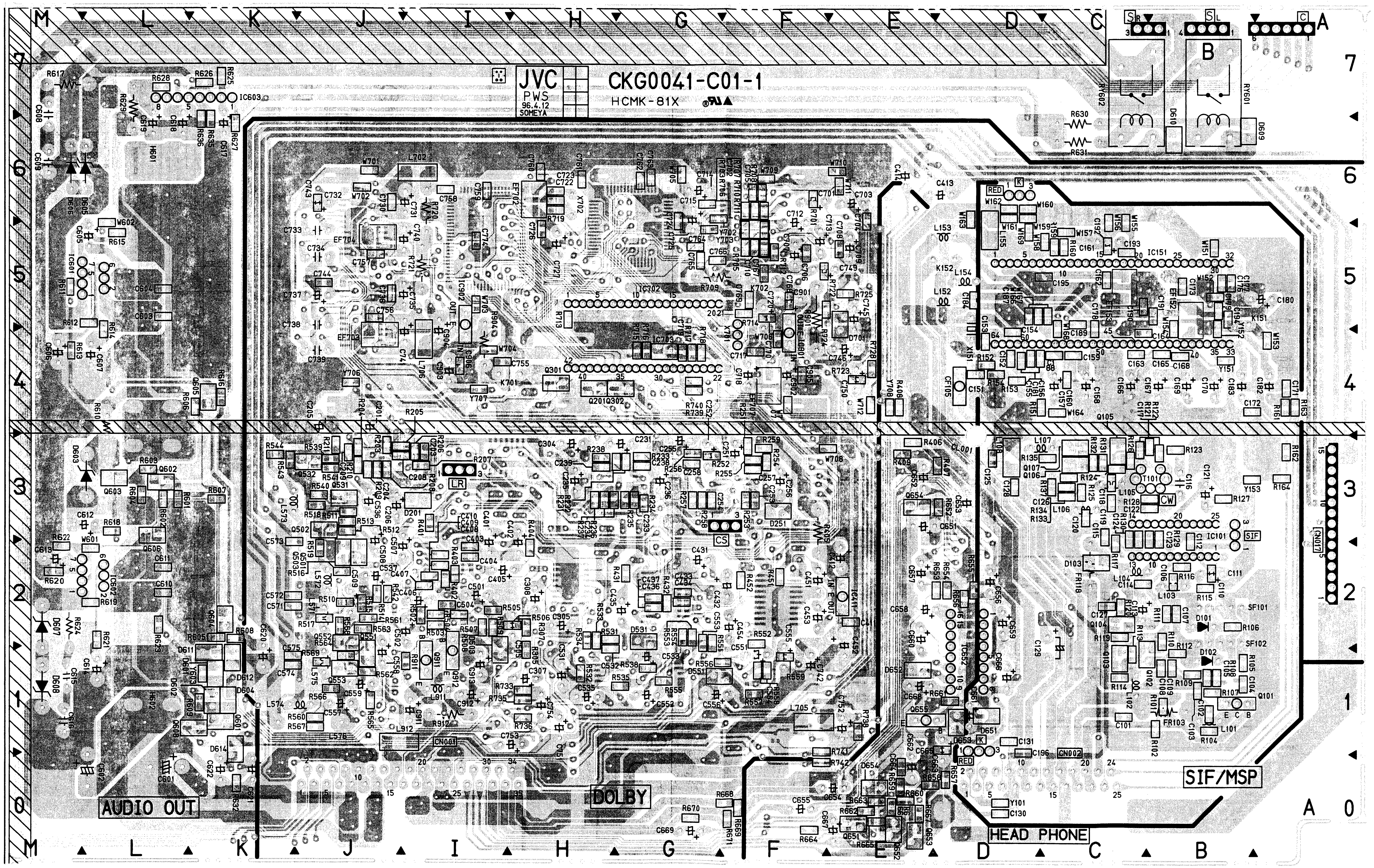
AUDIO PWB ASS'Y
SKB-6001A
PIN JACK
PWB ASS'Y
SKB-06101A
AUDIO OUT
CN017
CH42151-015RT
J001 CENTER
J002 L FRONT
J001 R
J002 L REAR (SURROUND)
J001 R
IC301
TC4052BF-W
PASS/SURROUND SW
Q301
DTC144EK-X
SW
IC201
M5201AFP-W
SW AMP
Q201 SW
DTC144EK-X
IC231
M5201AFP-W
SW AMP
IC251
BA4558F-W
AMP
IC401
TDA7315D
VOL. & TONE
Q302 SW
DTC144EK-X
IC302
TC4052BF-W
L. R/CENTRE SW
IC431
TDA7315D
CENTRE
VOL. & TONE
IC451
TDA7315D
REAR VOL. & TONE
IC411
AN78L09-Y
9V REG.
IC501
BA4558F-W
AMP
Q501 2SA1162(YG)-X
MUTE
Q502
DTC323TK-X
MUTE
Q503
DTC323TK-X
MUTE
IC531
BA4558F-W
AMP
Q531 2SA1162(YG)-X
MUTE
Q532
DTC323TK-X
MUTE
IC551
BA4558F-W
AMP
Q551
2SA1162(YG)-X
MUTE
Q552
DTC323TK-X
MUTE
Q553
DTC323TK-X
MUTE
IC711
BA4558F-W
AMP
Q912
2SC2655(Y)-T
FILTER
Q911
2SK105(E)-T
FILTER
Q607 *2
Q608 *1
D613 M1MA151K-X
D614 M1MA151K-X
D615 M1MA151K-X
D201 MA3062-X
D251 MA3062-X
D501 MA3150(M)-X
D502 MA3150(M)-X
D503 MA3056-X
D531 MA3056-X
D532 MA3150(M)-X
D551 MA3056-X
D552 MA3150(M)-X
D553 MA3150(M)-X
CNOLR
TP-R
TP-L
CNOCS
TP-C
TP-E
TP-S
CN001
L-IN
GND
R-IN
12V
12V
A-MUTE
SIGNAL
PWB ASS'Y
PASS
H:SURROUND
L2
H:JTS
L:DOLBY.DAP
JTS
CEN
H:CEN_CH
L:L.R_CH
R2
A_GND
A_SDA1
A_SDA3
A_SDA2
A_SCL
C
S
12V
R1
L1
HP_GND
MAIN_L
MAIN_R
HP_L
HP_R
A_MUTE
CENTER
SL
SR
L576
Y651 OPT
Y708 0
L911 0Ω
L912 4.7
CE40344-4R7YL
GRD143J-0R0SX
GRD149J-1R0S

AUDIO PWB PATTERN [A (PARTS) SIDE] (SKB-6001A)

(Magnification rate 118%)

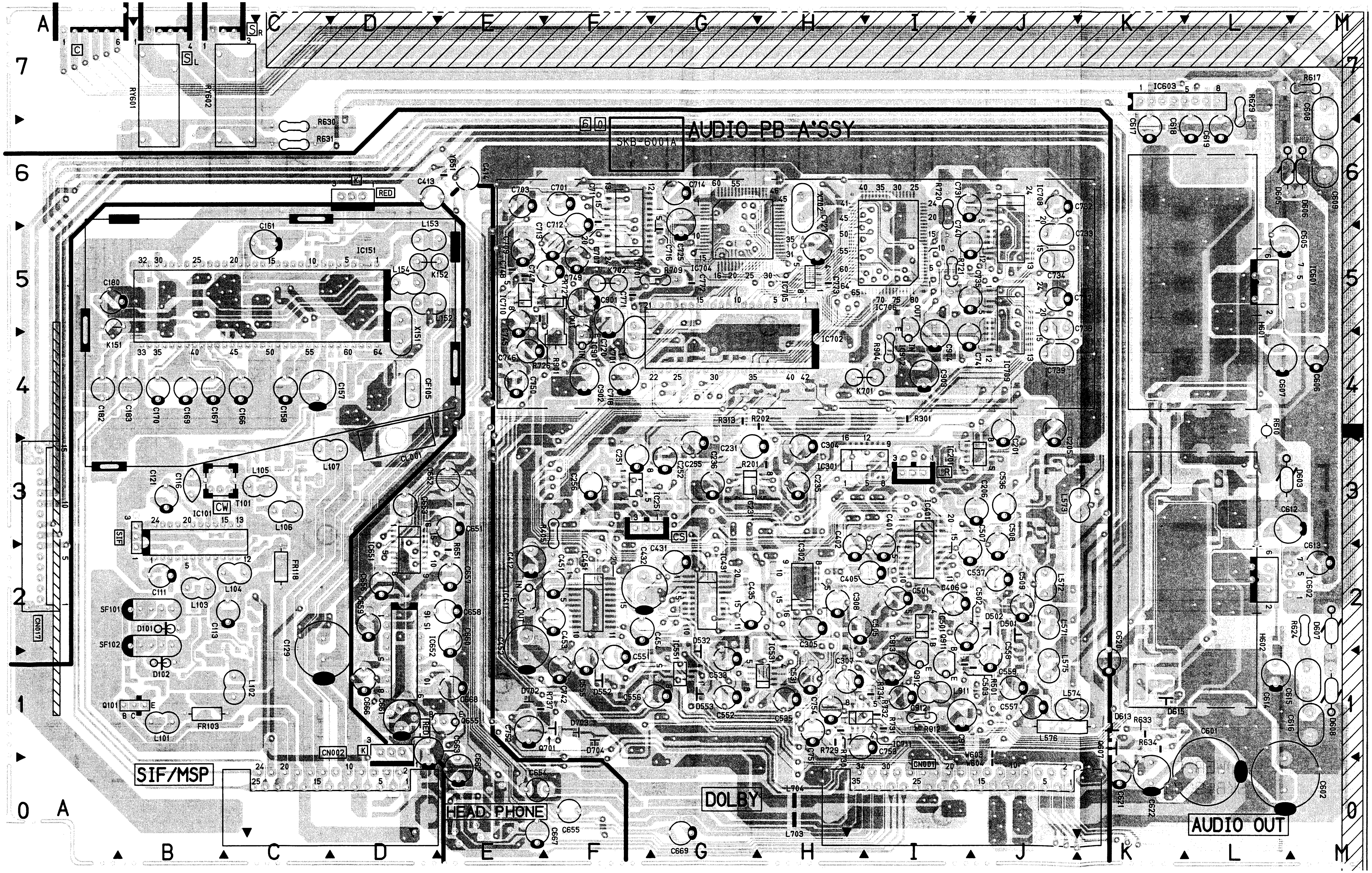
FRONT

TOP


JVC
PWS
96.4.12
SOMEYA
CKG0041-C01-1
HCMK-81X
AUDIO OUT
DOLBY
HEAD PHONE
SIF/MSP
CN001
CN002
IC603
IC601
IC602
IC702
IC151
IC101
RY602
RY601
M
L
K
J
I
H
G
F
E
D
C
B
A
7
6
5
4
3
2
1
0

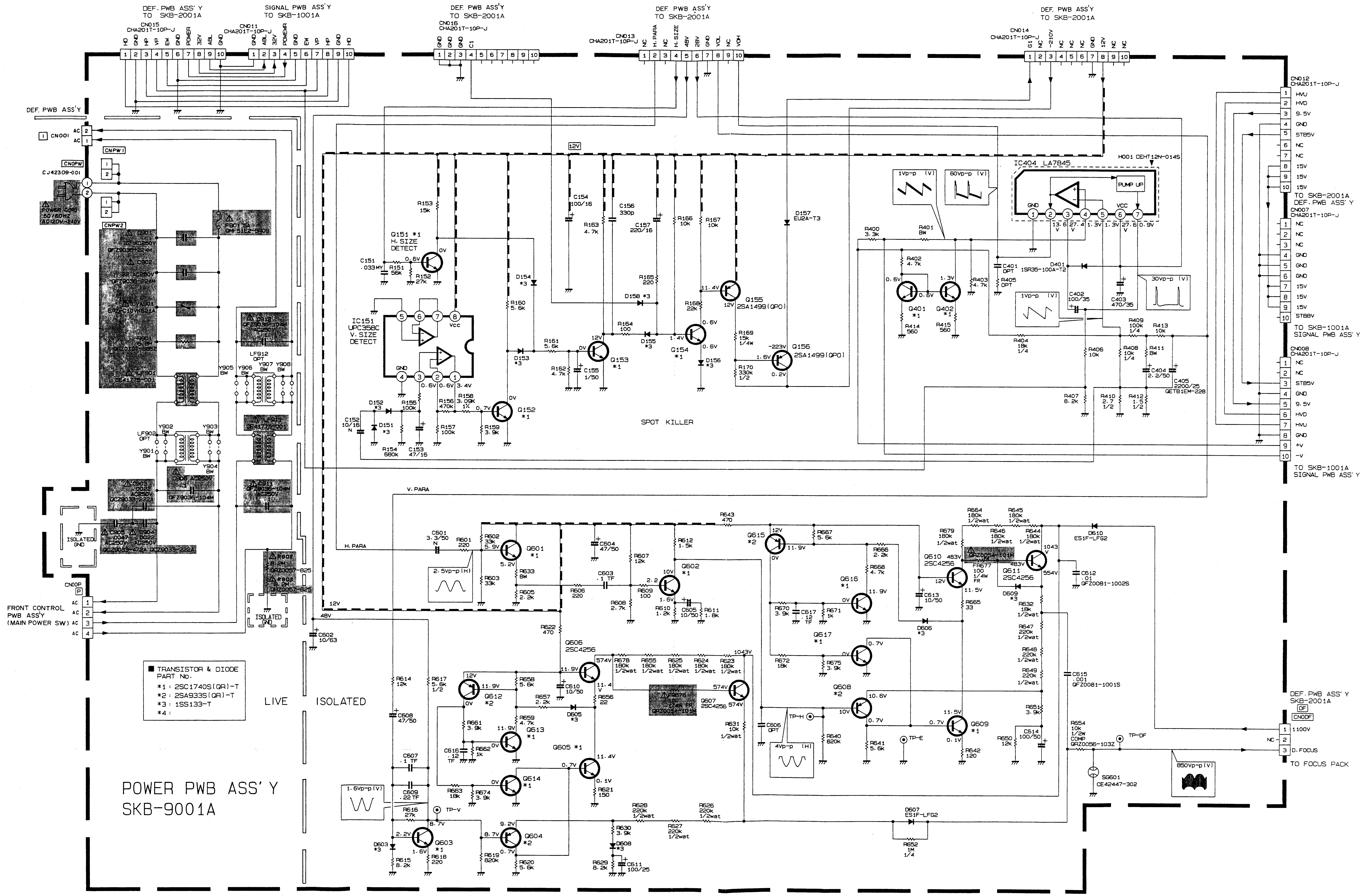
AUDIO PWB PATTERN [B (SOLDER) SIDE] (SKB-6001A)

⬆ TOP ➡ FRONT (Magnification rate 118%)


AUDIO PB A'SSY
SKB-6001A
SIF/MSP
HEAD PHONE
DOLBY
AUDIO OUT
IC151
IC101
IC702
IC704
IC706
IC709
IC301
IC201
IC401
IC451
IC501
IC602
IC603
IC651
IC652
CN001
CN002
CN017
RY601
RY602
A
B
C
D
E
F
G
H
I
J
K
L
M
0
1
2
3
4
5
6
7

POWER PWB CIRCUIT DIAGRAM

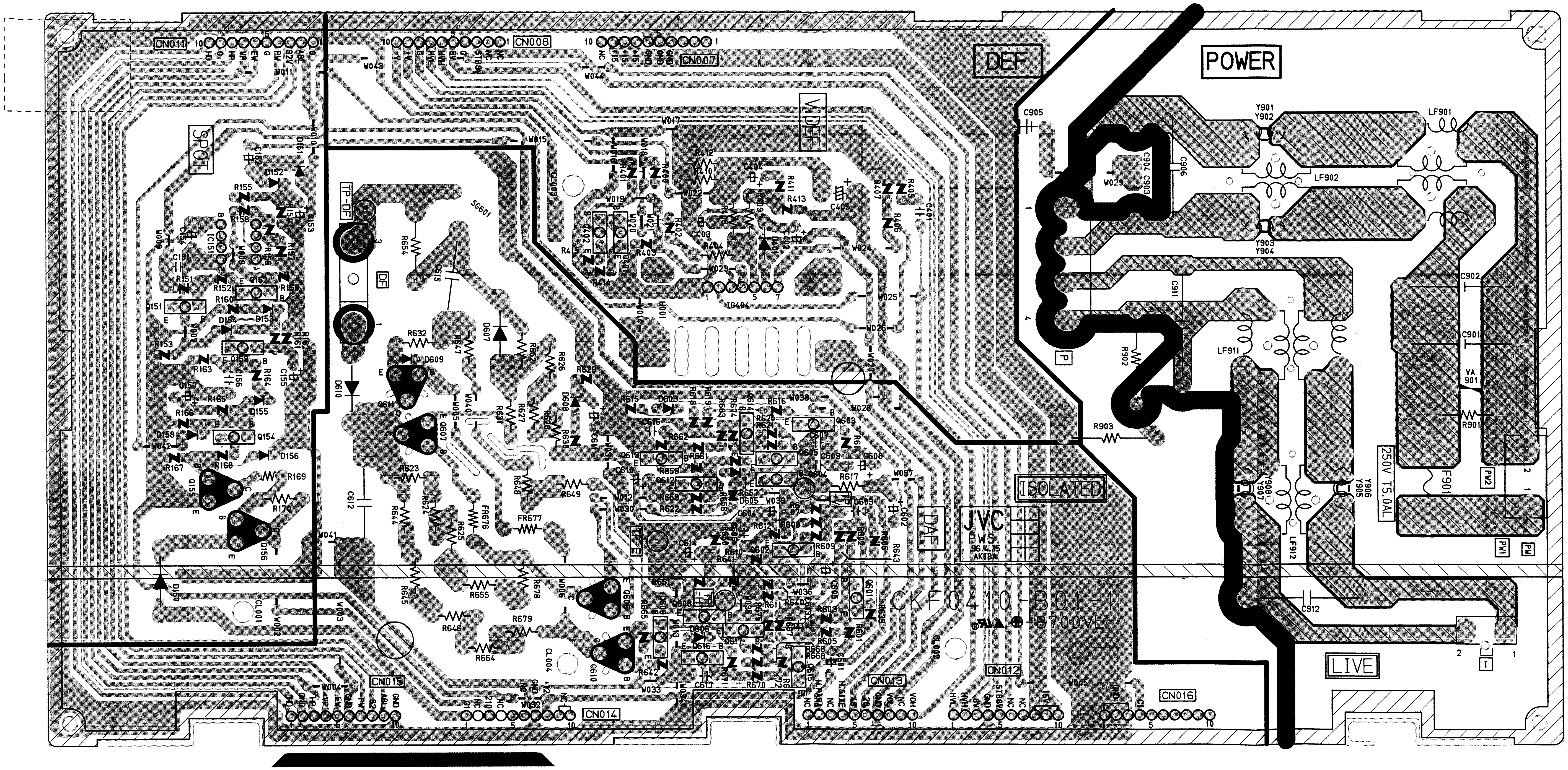
Refer to the following PWB pattern. : POWER PWB PATTERN 2-45page


DEF. PWB ASS' Y TO SKB-2001A
CN015 CHA201T-10P-J
SIGNAL PWB ASS'Y TO SKB-1001A
CN011 CHA201T-10P-J
DEF. PWB ASS'Y TO SKB-2001A
CN016 CHA201T-10P-J
DEF. PWB ASS'Y TO SKB-2001A
CN013 CHA201T-10P-J
DEF. PWB ASS'Y TO SKB-2001A
CN014 CHA201T-10P-J
CN012 CHA201T-10P-J
HVU
HVD
9.5V
GND
STB5V
NC
15V
TO SKB-2001A DEF. PWB ASS' Y
CN007 CHA201T-10P-J
STB8V
TO SKB-1001A SIGNAL PWB ASS' Y
CN008 CHA201T-10P-J
+V
-V
TO SKB-1001A SIGNAL PWB ASS' Y
DEF. PWB ASS'Y
CN001
CNPW1
CNOPW
CJ42309-001
POWER CORD 50/60HZ AC120V-240V
CNPW2
F901 5A QMF51E2-5R0S
CN00P
FRONT CONTROL PWB ASS'Y (MAIN POWER SW)
ISOLATED GND
Q151 *1 H. SIZE DETECT
IC151 UPC358C V. SIZE DETECT
Q152 *1
Q153 *1
Q154 *1
Q155 2SA1499(QP0)
Q156 2SA1499(QP0)
D157 EU2A-T3
SPOT KILLER
IC404 LA7845
PUMP UP
H001 CEHT12N-014S
Q401 *1
Q402 *1
D401 1SR35-100A-T2
1Vp-p (V)
60Vp-p (V)
30Vp-p (V)
V. PARA
H. PARA
2.5Vp-p(H)
Q601 *1
Q602 *1
Q603 *1
Q604 *2
Q605 *1
Q606 2SC4256
Q607 2SC4256
Q608 *2
Q609 *1
Q610 2SC4256
Q611 2SC4256
Q612 *2
Q613 *1
Q614 *1
Q615 *2
Q616 *1
Q617 *1
D607 ES1F-LFG2
D610 ES1F-LFG2
TP-V
TP-H
TP-E
TP-DF
4Vp-p (H)
1.6Vp-p(V)
850Vp-p(V)
SG601 CE42447-302
DEF. PWB ASS' Y SKB-2001A
CN0DF
1100V
D. FOCUS
TO FOCUS PACK
LIVE
ISOLATED
POWER PWB ASS' Y
SKB-9001A
■ TRANSISTOR & DIODE PART No.
*1 : 2SC1740S(QR)-T
*2 : 2SA933S(QR)-T
*3 : 1SS133-T
*4 :

POWER PWB PATTERN (SKB-9001A)

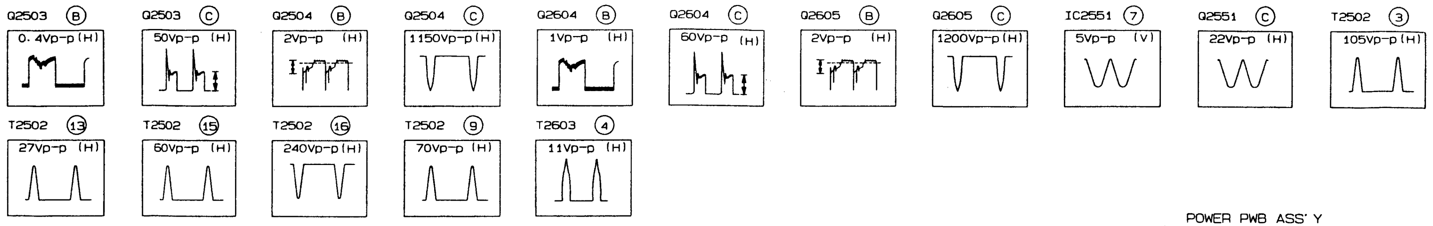
(Magnification rate 110%)

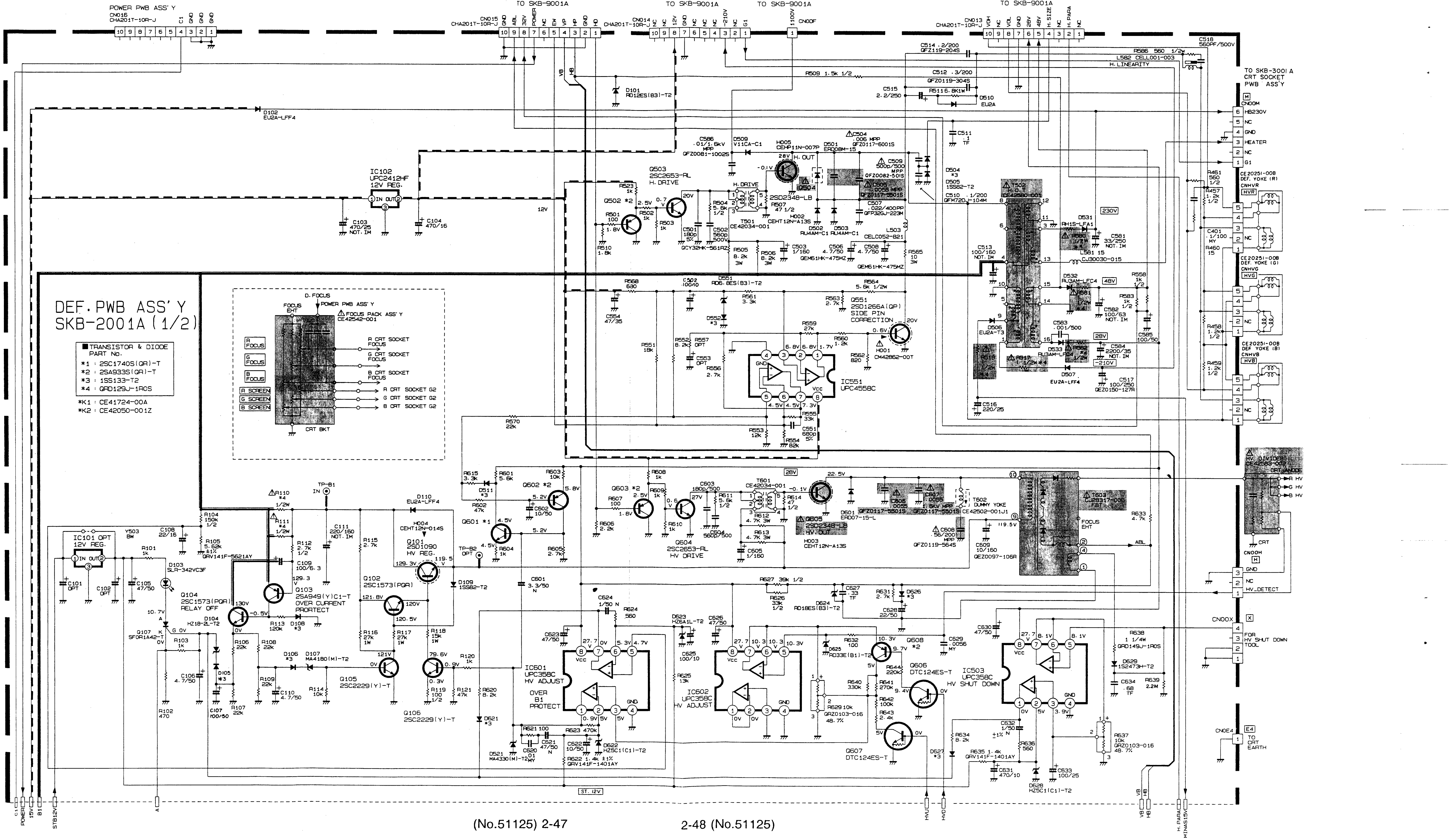
FRONT


CN011
CN008
CN007
CN015
CN014
CN013
CN012
CN016
DEF
POWER
V.DEF
SPOT
TP-DF
DF
TP-E
DAF
ISOLATED
JVC PWS 96.4.15 AKIBA
CKF0410-B01-1
8700VL
250V T5.0AL
F901
LF901
LF902
LF911
LF912
Y901
Y902
Y903
Y904
C905
C906
C911
C912
C901
C902
VA 901
R901
R902
R903
W029
IC151
IC404
SG601
LIVE
P
PW1
PW2

DEF. PWB CIRCUIT DIAGRAMS - 1/2

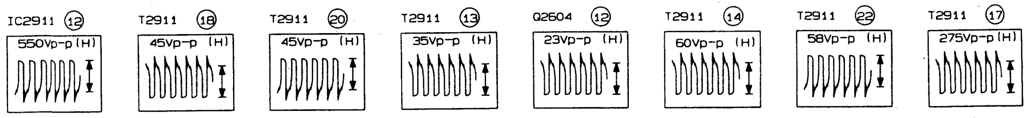
Refer to the following PWB pattern. : DEF. PWB PATTERN 2-51page

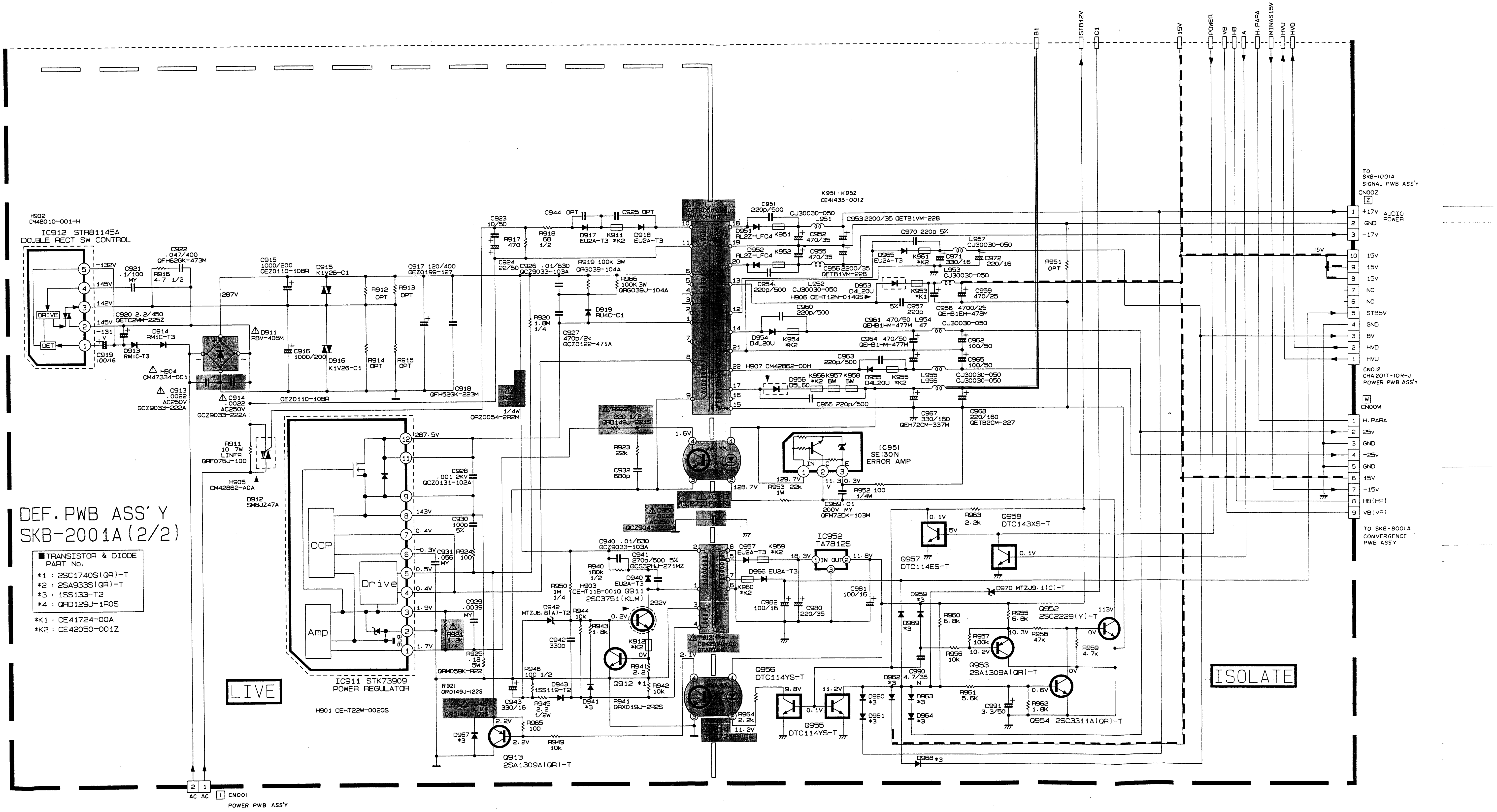



DEF. PWB ASS'Y
SKB-2001A (1/2)
■TRANSISTOR & DIODE PART No.
*1 : 2SC1740S(QR)-T
*2 : 2SA933S(QR)-T
*3 : 1SS133-T2
*4 : QRD129J-1R0S
*K1 : CE41724-00A
*K2 : CE42050-001Z
POWER PWB ASS'Y
CN016
CHA201T-10R-J
POWER PWB ASS'Y TO SKB-9001A
CN015
CN014
CN00F
CN013
TO SKB-3001A CRT SOCKET PWB ASS'Y
CN00M
HB230V
HEATER
G1
CE20251-008 DEF. YOKE (R)
CE20251-008 DEF. YOKE (G)
CE20251-008 DEF. YOKE (B)
HV. DIVIDER CE42580-002
CRT ANODE
HV
CN00H
HV_DETECT
CN00X
FOR HV SHUT DOWN TOOL
CN0E4
TO CRT EARTH
IC102 UPC2412HF 12V REG.
IC101 OPT 12V REG.
D102 EU2A-LFF4
D101 RD12ES(B3)-T2
Q503 2SC2653-RL H. DRIVE
Q502 *2
H005 CEHP11N-007P
H. OUT
2SD2348-LB
T501 CE42034-001
H. DRIVE
T502 H.O.T CE42580-001
230V
48V
28V
-210V
L582 CELL001-003 H. LINEARITY
Q551 2SD1266A(QP) SIDE PIN CORRECTION
H001 CM42862-00T
IC551 UPC4558C
D.FOCUS
FOCUS PACK ASS'Y CE42542-001
R CRT SOCKET FOCUS
G CRT SOCKET FOCUS
B CRT SOCKET FOCUS
R SCREEN
G SCREEN
B SCREEN
R CRT SOCKET G2
G CRT SOCKET G2
B CRT SOCKET G2
CRT BKT
Q601 *1
Q602 *2
Q603 *2
Q604 2SC2653-RL HV DRIVE
T601 CE42034-001
Q605 2SD2348-LB HV OUT
H003 CEHT12N-A13S
T602 DUMMY YOKE CE42502-001J1
T603 CE28317-00B FBT
FOCUS EHT
ABL
Q101 2SD1090 HV REG.
H004 CEHT12N-014S
D110 EU2A-LFF4
TP-B1 IN
TP-B2 OPT
Q102 2SC1573(PQR)
Q103 2SA949(Y)C1-T OVER CURRENT PRORTECT
Q104 2SC1573(PQR) RELAY OFF
Q105 2SC2229(Y)-T
Q106 2SC2229(Y)-T
Q107 SF0R1A42-T
D103 SLR-342VC3F
IC501 UPC358C HV ADJUST OVER B1 PROTECT
IC502 UPC358C HV ADJUST
IC503 UPC358C HV SHUT DOWN
Q606 DTC124ES-T
Q607 DTC124ES-T
Q608 *2
ST. 12V
C1 POWER 15V B1 STB12V
A
HVU HVD
VB HB
H.PARA MINAS15V

DEF. PWB CIRCUIT DIAGRAMS - 2/2

Refer to the following PWB pattern. : DEF. PWB PATTERN 2-51page

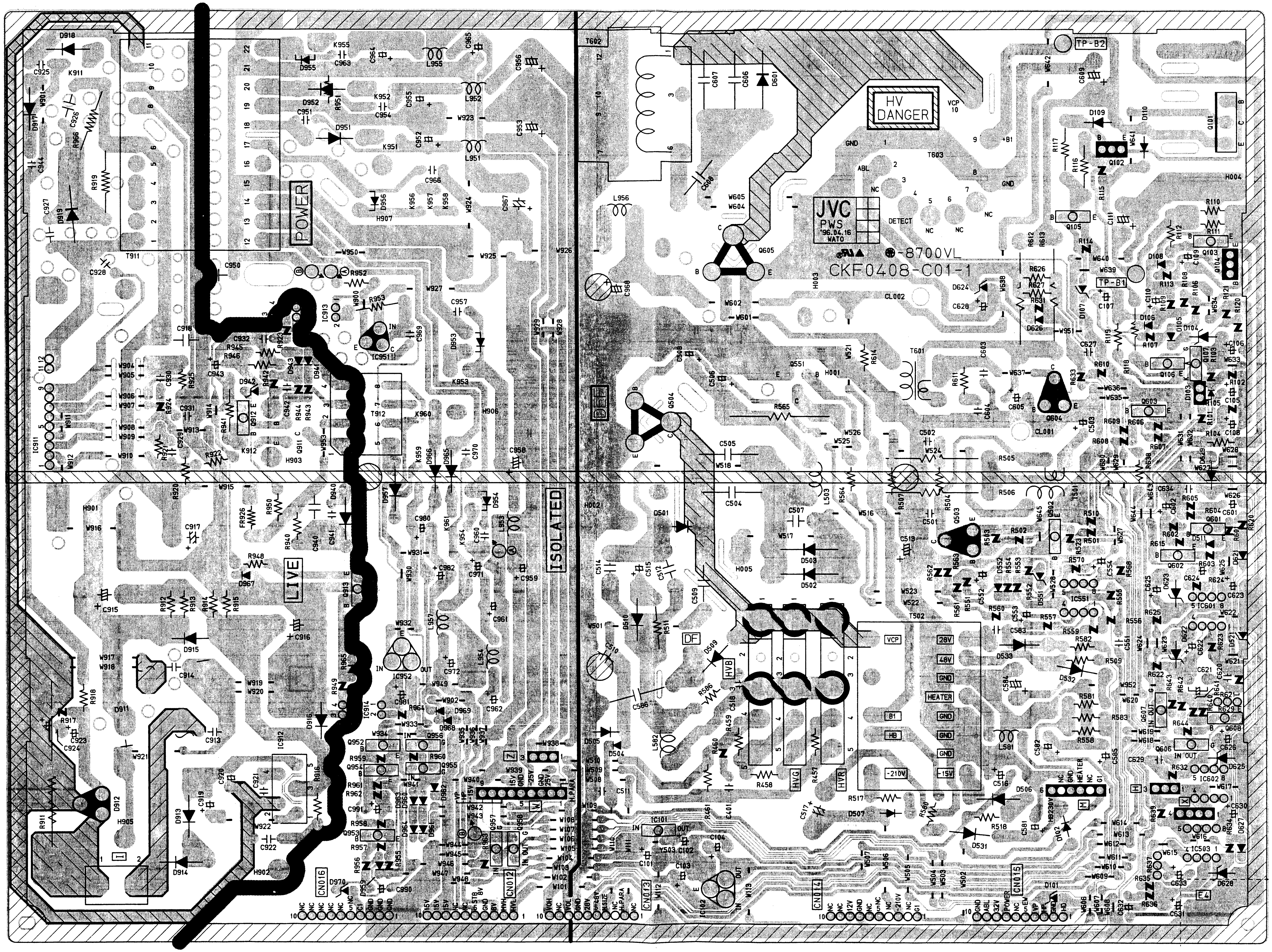



DEF.PWB ASS'Y
SKB-2001A(2/2)
■TRANSISTOR & DIODE PART No.
*1 : 2SC1740S(QR)-T
*2 : 2SA933S(QR)-T
*3 : 1SS133-T2
*4 : QRD129J-1R0S
*K1 : CE41724-00A
*K2 : CE42050-001Z
LIVE
ISOLATE
IC912 STR81145A DOUBLE RECT SW CONTROL
H902 CM48010-001-H
DRIVE
DET
IC911 STK73909 POWER REGULATOR
OCP
Drive
Amp
H901 CEHT22W-0020S
IC951 SE130N ERROR AMP
IC952 TA7812S
T911 CETS0541-001 SWITCHING
IC913 TLP721(GR)
T912 CETS0542-001 STARTER
Q911 2SC3751(KLM)
Q913 2SA1309A(QR)-T
Q952 2SC2229(Y)-T
Q953 2SA1309A(QR)-T
Q954 2SC3311A(QR)-T
Q955 DTC114YS-T
Q956 DTC114YS-T
Q957 DTC114ES-T
Q958 DTC143XS-T
D970 MTZJ9.1(C)-T
H903 CEHT11B-0010
H904 CM47334-001
H905 CM42862-A0A
H906 CEHT12N-014GS
H907 CM42862-00H
K951・K952 CE41433-001Z
TO SKB-1001A SIGNAL PWB ASS'Y
CN00Z
+17V AUDIO POWER
GND
-17V
15V
NC
STB5V
GND
8V
HVD
HVU
CN012 CHA201T-10R-J POWER PWB ASS'Y
CN00W
H.PARA
25V
GND
-25V
GND
15V
-15V
HB(HP)
VB(VP)
TO SKB-8001A CONVERGENCE PWB ASS'Y
CN001 POWER PWB ASS'Y
AC AC
B1 STB12V C1 15V POWER VB HB A H.PARA MINAS15V HVU HVD

DEF. PWB PATTERN (SKB-2001A)

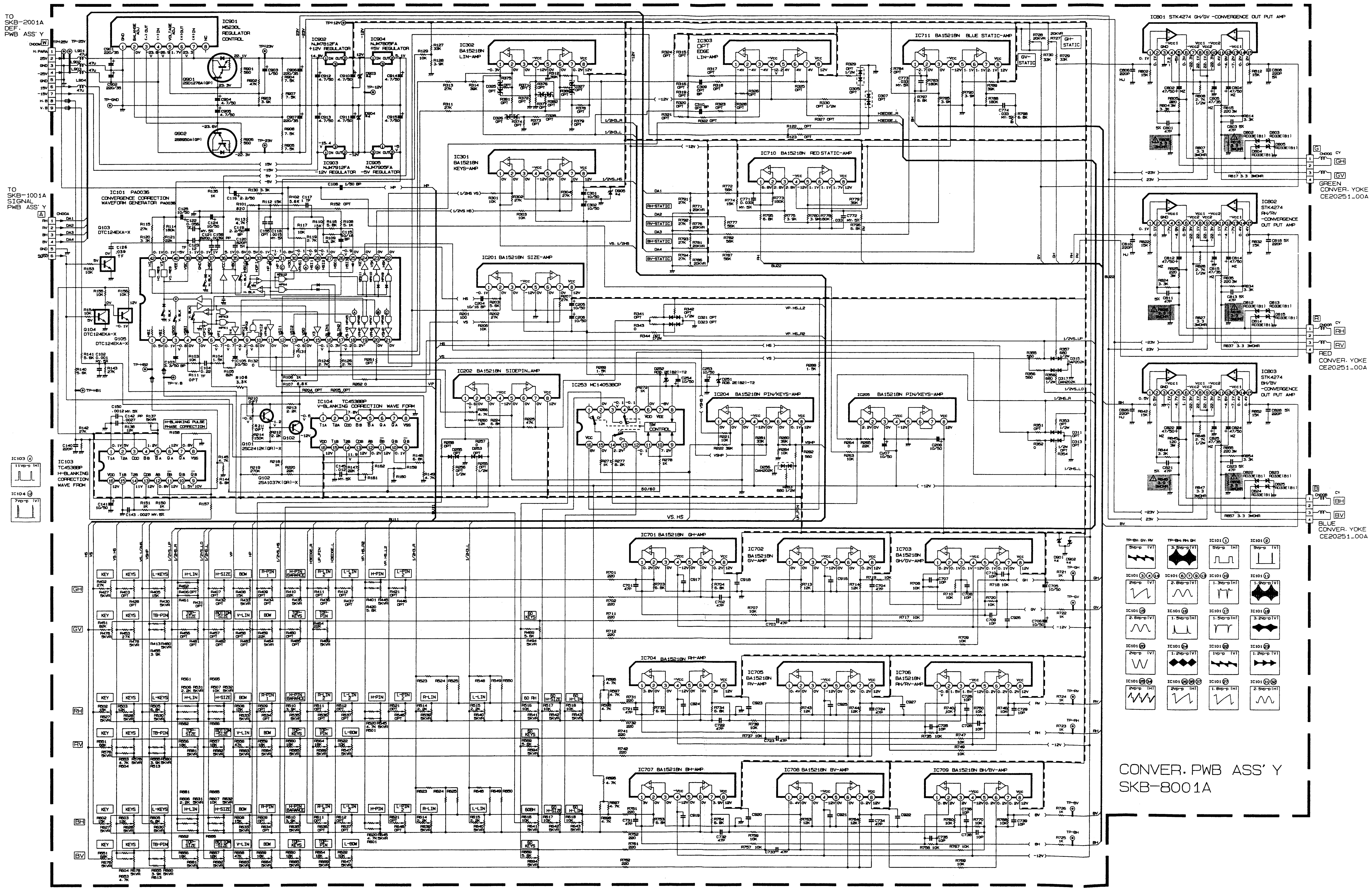
FRONT➡

(Magnification rate 100%)


POWER
LIVE
ISOLATED
DEF
DF
HV
DANGER
JVC
PWS
'96.04.16
WATO
-8700VL
CKF0408-C01-1
TP-B2
TP-B1
T911
T912
T602
T603
T601
T502
IC911
IC951
IC952
IC912
IC914
IC101
IC551
IC601
IC602
IC503
Q605
Q504
Q604
Q503
HVB
HVG
HVR
VCP
28V
48V
GND
HEATER
B1
HB
-210V
-15V
CN016
CN012
CN013
CN014
CN015

CONVERGENCE PWB CIRCUIT DIAGRAM

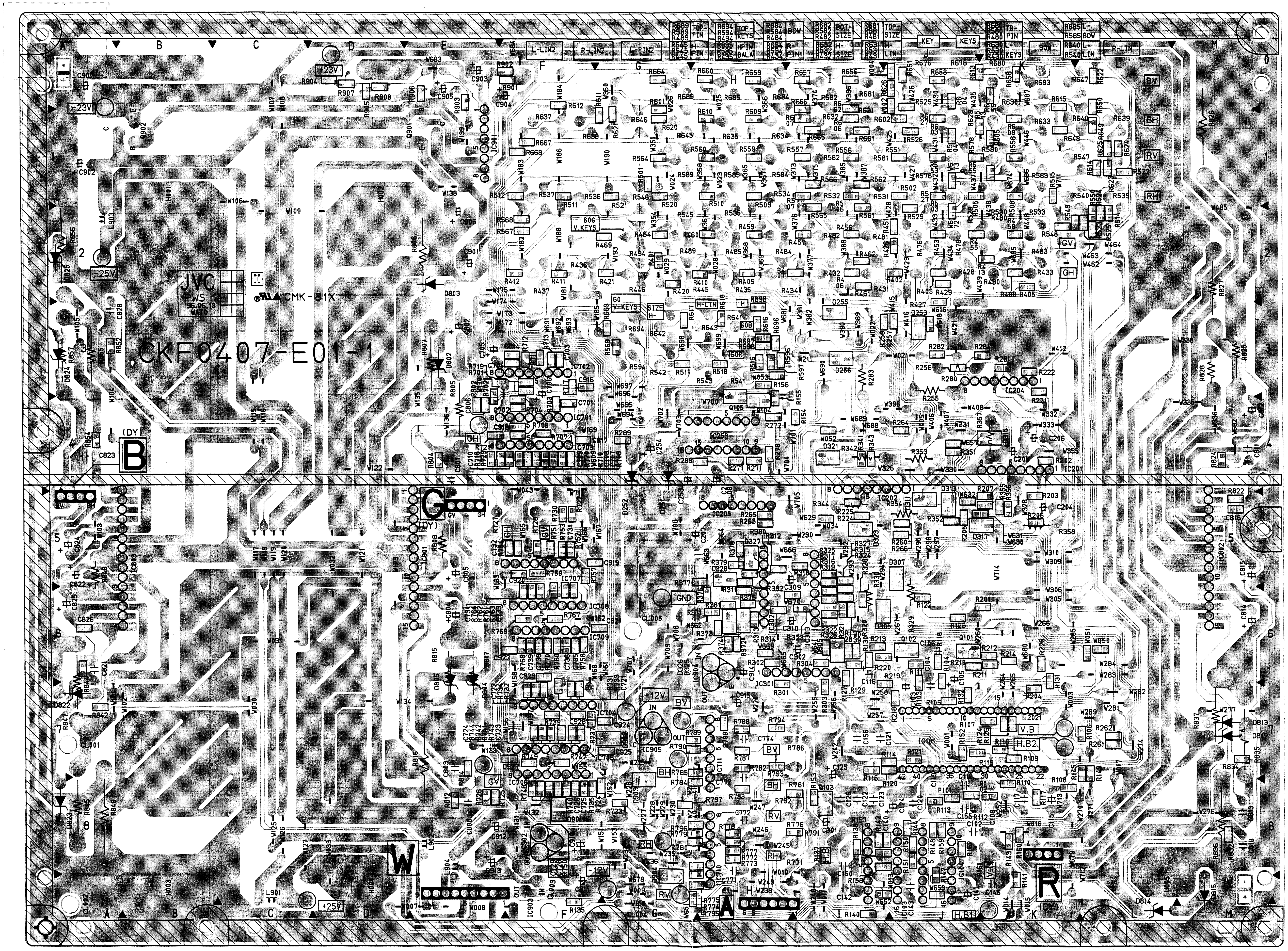
Refer to the following PWB pattern. : CONVEREGENCE PWB PATTERN 2-55page


TO SKB-2001A DEF. PWB ASS'Y
TO SKB-1001A SIGNAL PWB ASS'Y
IC901 M5230L REGULATOR CONTROL
Q901 2SD1276A(QP)
Q902 2SB950A(QP)
IC902 NJM7812FA +12V REGULATOR
IC904 NJM7805FA +5V REGULATOR
IC903 NJM7912FA -12V REGULATOR
IC905 NJM7905FA -5V REGULATOR
IC302 BA15218N LIN-AMP
IC303 OPT EDGE LIN-AMP
IC711 BA15218N BLUE STATIC-AMP
IC801 STK4274 GH/GV -CONVERGENCE OUT PUT AMP
IC301 BA15218N KEYS-AMP
IC710 BA15218N RED STATIC-AMP
IC101 PA0036 CONVERGENCE CORRECTION WAVEFORM GENERATOR PA0036
Q103 DTC124EKA-X
Q104 DTC124EKA-X
Q105 DTC124EKA-X
IC201 BA15218N SIZE-AMP
IC802 STK4274 RH/RV -CONVERGENCE OUT PUT AMP
IC202 BA15218N SIDEPIN AMP
IC253 MC14053BCP
IC204 BA15218N PIN/KEYS-AMP
IC205 BA15218N PIN/KEYS-AMP
IC803 STK4274 BH/BV -CONVERGENCE OUT PUT AMP
IC104 TC4538BP V-BLANKING CORRECTION WAVE FORM
IC103 TC4538BP H-BLANKING CORRECTION WAVE FORM
Q101 2SC2412K(QR)-X
Q102 2SA1037K(QR)-X
IC701 BA15218N GH-AMP
IC702 BA15218N GV-AMP
IC703 BA15218N GH/GV-AMP
IC704 BA15218N RH-AMP
IC705 BA15218N RV-AMP
IC706 BA15218N RH/RV-AMP
IC707 BA15218N BH-AMP
IC708 BA15218N BV-AMP
IC709 BA15218N BH/BV-AMP
GREEN CONVER. YOKE CE20251-00A
RED CONVER. YOKE CE20251-00A
BLUE CONVER. YOKE CE20251-00A
CONVER. PWB ASS'Y SKB-8001A

CONVERGENCE PWB PATTERN (SKB-8001A)

TOP(FRONT)

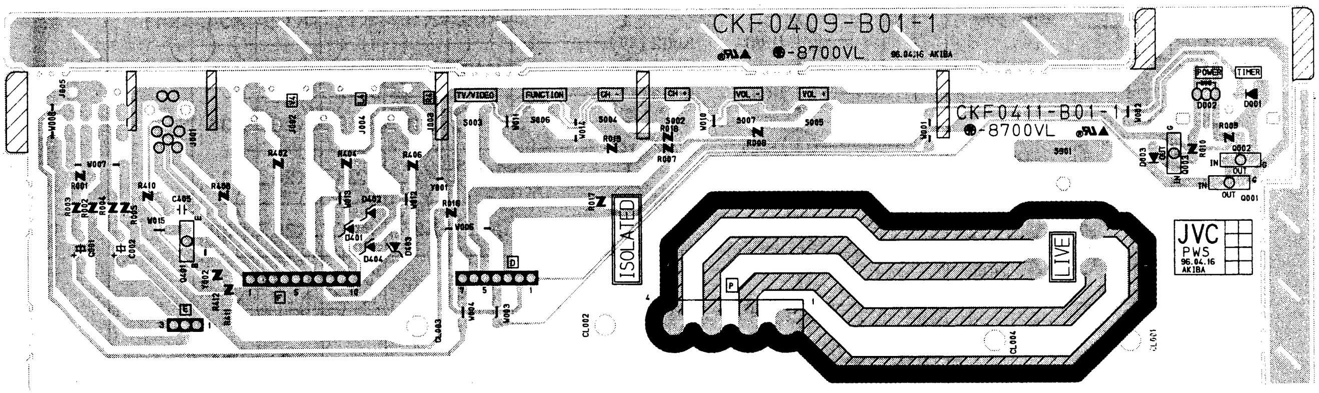
(Magnification rate 100%)


CKF0407-E01-1
JVC
PWB
CMK-81X
B
G
W
R
A
(DY)
+23V
-23V
-25V
+25V
+12V
-12V
GND
L-LIN2
R-LIN2
L-PIN2
R-LIN
KEY
KEYS
BOW
BV
BH
RV
RH
GV
GH
V.B
H.B2
H.B1
IC101
IC201
IC202
IC204
IC259
IC301
IC701
IC702
IC703
IC704
IC705
IC706
IC707
IC708
IC709
IC710
IC711
IC901
IC902
IC903
IC904
IC905

FRONT CONTROL PWB PATTERN (SKB-8101A)

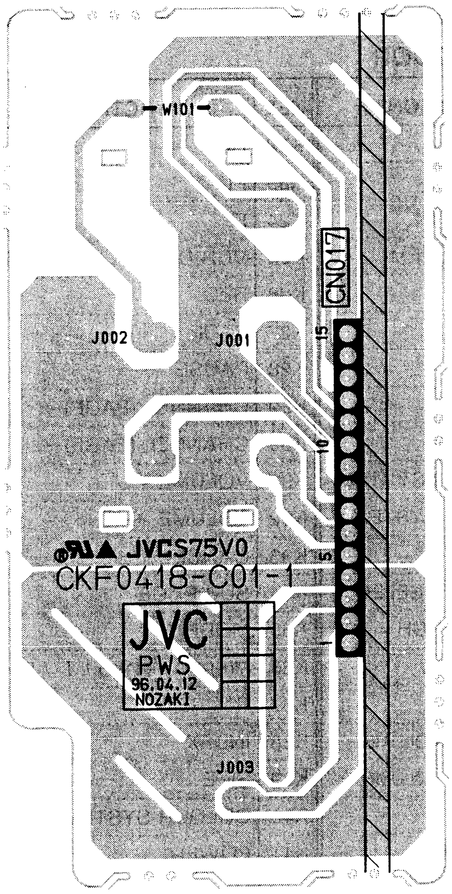
(Magnification rate 60%)

➡ **FRONT**


CKF0409-B01-1
-8700VL
CKF0411-B01-1
-8700VL
TV/VIDEO
FUNCTION
CH -
CH +
VOL -
VOL +
POWER
TIMER
ISOLATED
LIVE
JVC
PWS
96.04.16
AKIBA

REMO-CON PWB PATTERN (SKB-8102A)

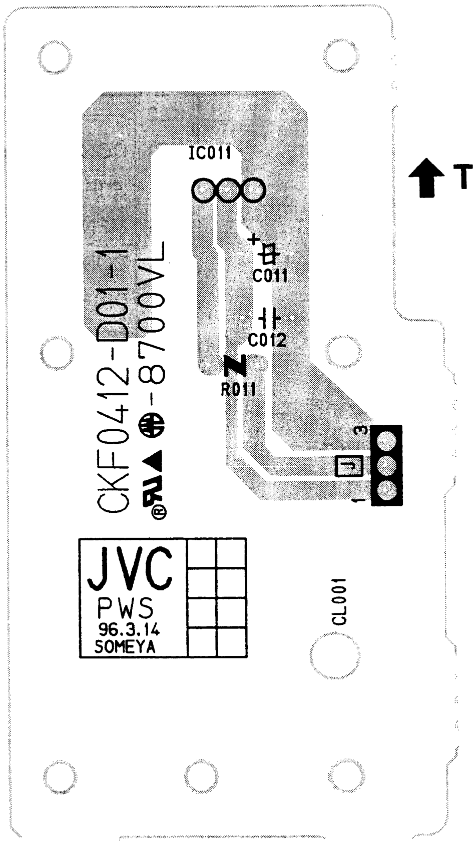
(Magnification rate 118%)


W101
CN017
15
10
5
J002
J001
J003
JVCS75V0
CKF0418-C01-1
JVC
PWS
96.04.12
NOZAKI

⬆ **TOP**

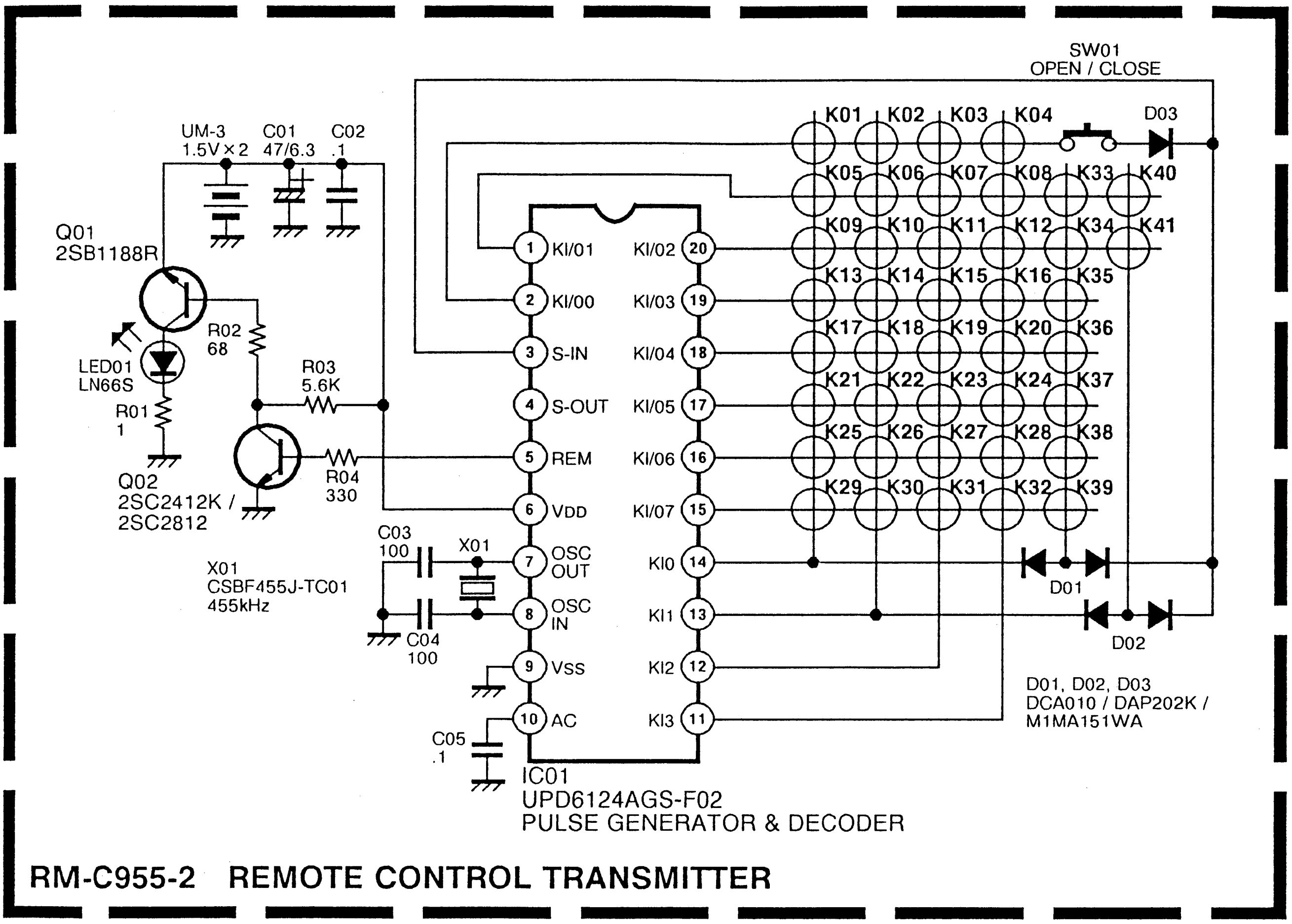
PIN JACK PWB PATTERN (SKB-06101A)

(Magnification rate 130%)


IC011
C011
C012
R011
CKF0412-D01-1
-8700VL
3
1
J
JVC
PWS
96.3.14
SOMEYA
CL001

⬆ **TOP**

REMOTE CONTROL UNIT CIRCUIT DIAGRAM


SW01
OPEN / CLOSE
K01
K02
K03
K04
D03
K05
K06
K07
K08
K33
K40
K09
K10
K11
K12
K34
K41
K13
K14
K15
K16
K35
K17
K18
K19
K20
K36
K21
K22
K23
K24
K37
K25
K26
K27
K28
K38
K29
K30
K31
K32
K39
UM-3
1.5V×2
C01
47/6.3
C02
.1
Q01
2SB1188R
R02
68
LED01
LN66S
R01
1
R03
5.6K
Q02
2SC2412K /
2SC2812
R04
330
X01
CSBF455J-TC01
455kHz
C03
100
X01
C04
100
C05
.1
1 KI/01
2 KI/00
3 S-IN
4 S-OUT
5 REM
6 VDD
7 OSC OUT
8 OSC IN
9 Vss
10 AC
KI/02 20
KI/03 19
KI/04 18
KI/05 17
KI/06 16
KI/07 15
KI0 14
KI1 13
KI2 12
KI3 11
D01
D02
D01, D02, D03
DCA010 / DAP202K /
M1MA151WA
IC01
UPD6124AGS-F02
PULSE GENERATOR & DECODER

RM-C955-2 REMOTE CONTROL TRANSMITTER

■CLOSE THE DOOR

KEY	FUNCTION	KEY	FUNCTION
K01	SOUND MODE	K22	————
K02	7	K23	CONTROL +
K03	8	K24	SURROUND
K04	9	K25	MENU
K05	THEATRE STATUS	K26	CONTROL ▼
K06	————	K27	DISPLAY
K07	0	K28	MUTE
K08	- / - -	K29	CHANNEL (PAGE) -
K09	PIP ON / OFF	K30	CHANNEL (PAGE) +
K10	PIP SOURCE	K31	VOLUME -
K11	PIP POSITION	K32	VOLUME +
K12	PIP SWAP	K33	TV / VIDEO
K13	————	K34	1
K14	————	K35	2
K15	PIP CHANNEL -	K36	3
K16	PIP CHANNEL +	K37	PICTURE MODE
K17	————	K38	4
K18	CONTROL △	K39	5
K19	————	K40	6
K20	VNR	K41	POWER
K21	CONTROL -		

■OPEN THE DOOR

KEY	FUNCTION	KEY	FUNCTION
K01	HOLD	K22	REW
K02	REVEAL	K23	PLAY
K03	TV / TXT / MIX	K24	FF
K04	SOUND SYSTEM	K25	VCR CH -
K05	RED	K26	REC
K06	GREEN	K27	STOP
K07	YELLOW	K28	PAUSE
K08	BLUE	K29	CHANNEL (PAGE) -
K09	PIP ON / OFF	K30	CHANNEL (PAGE) +
K10	PIP COLOUR SYSTEM	K31	VOLUME -
K11	PIP SOUND SYSTEM	K32	VOLUME +
K12	OFF TIMER	K33	CANCEL
K13	HEADPHONE SELECT	K34	SUB PAGE
K14	PIP CH SEARCH	K35	MODE
K15	PIP STOROBE	K36	STEREO / MONO · I / II
K16	PIP FREEZE	K37	STORE
K17	HEADPHONE VOLUME -	K38	INDEX
K18	HEADPHONE VOLUME +	K39	SIZE
K19	EJECT	K40	COLOUR SYSTEM
K20	VCR POWER	K41	POWER
K21	VCR CH +		

9607 VP
A.N

PARTS LIST

CAUTION

- The parts identified by the ⚠ symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety .
- The parts not indicated in this Parts List and those which are filled with lines — in the Parts No. columns will not be supplied .
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied .
- As a rule, the resistors and capacitors which are indicated as shown in "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" are not shown in the list of the parts on the board .
  When ordering the service parts, confirm the resistance/rated power, capacitance/rated voltage, and type of the parts, then order by the part No. indicated according to "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" .

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% - 10%	+50% - 10%	+80% - 20%	+100% - 0%

HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS

■ RESISTOR

Q R □ □ □ □ □ — ○ ○ ○

Kind	Rated Power	Shape	Tolerance	Resistance
□	□ □	□	□	○ ○ ○

Symbol	Part Name
C	COMP.R
D	C R
S	CH MG R

Symbol	Rated Power
0 1	1 w
1 2	1/2 w
1 4	1/4 w
1 6	1/6 w
1 8	1/8 w

Symbol	Shape
1	Straight lead
8	Chip

Indicate with first two-figure expressed by Ω and following 0.
please note that,in case of resistance less than 10 Ω, a letter "R"will be effective as point.

EX.

2.2 Ω = 2R2

470 Ω = 47×10¹ → 471

150kΩ = 15×10⁴ → 154

■ CAPACITOR

Q □ □ □ □ □ □ — ○ ○ ○

Kind	Shape	Rated Voltage	Tolerance	Capacitance
□ □	□	□ □	□	○ ○ ○

Symbol	Part Name
CS	C CAP.
CS	CH C CAP.
ET	E CAP.
FM	M CAP.

6Figure \ 5Figure	0	1	2
A		10V	100V
C		16V	160V
D			200V
E		25V	250V
H		50V	500V
J	6.3V	63V	
V		35V	

Indicate with first two-figure expressed by pF and following 0.
Please note that,in case of capacitance less than 10 pF a letter "R" will be effective as point.

EX

5pF = 5R0

1000pF = 10×10² → 102

47µF = 47×10⁶ → 476

Symbol	Shape
1	Straight lead
1	Leads in the same direction
8	Chip
A	Leads in the same direction (compact part)

M1 EXPLODED VIEW PARTS LIST

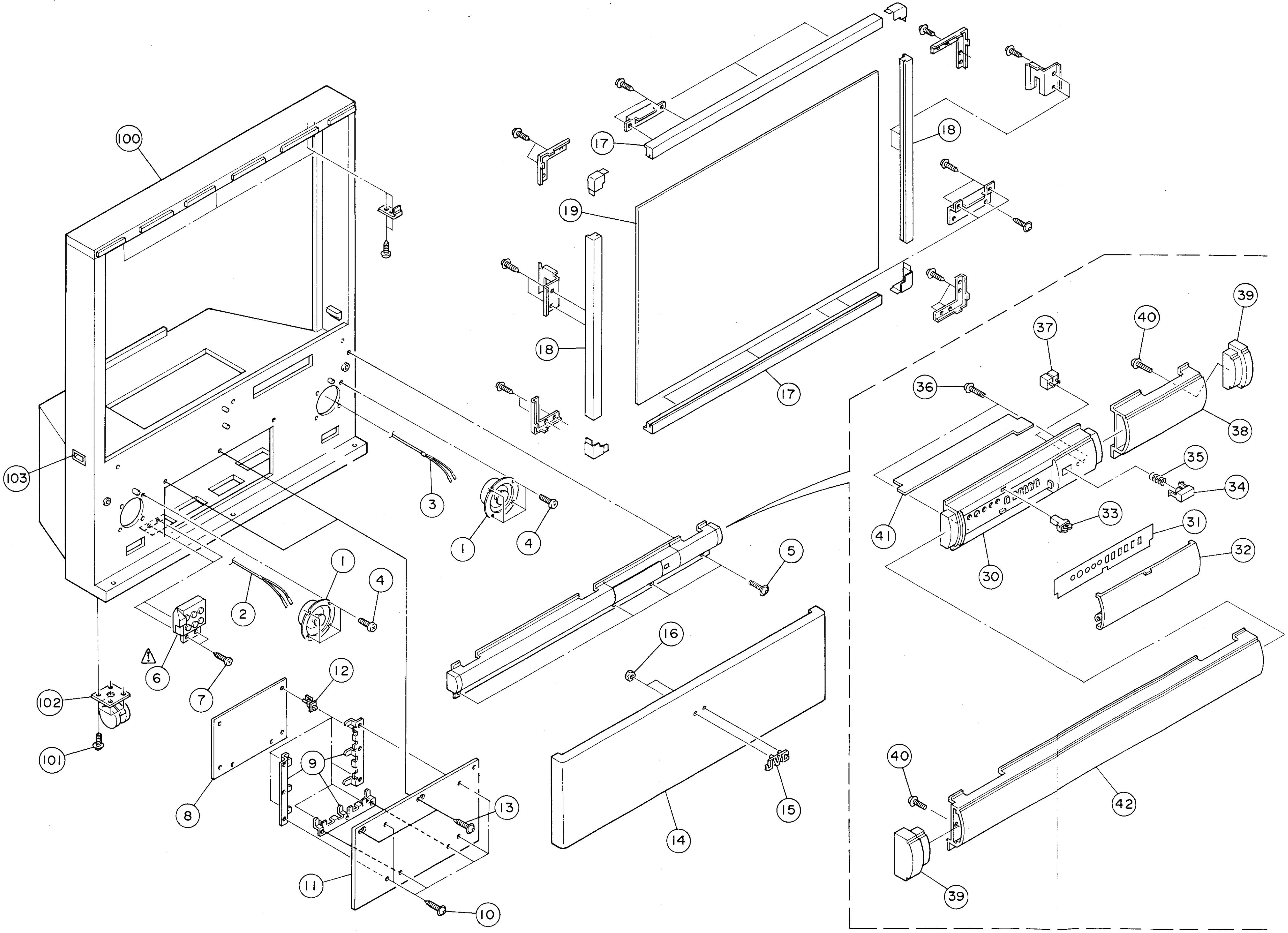
⚠	Ref.No.	Part No.	Part Name	Description	Local
	1	DX166-08T	SPEAKER	(×2)	
	2	CHGS0049-0A-G	SP WIRE ASSY		
	3	CHGS0048-0A-G	SP WIRE ASSY		
	4	SDSA4015Z	BIND HEAD SCREW	(×8)	
	5	GBSA4018M	TAP SCREW	(×4)	
⚠	6	CE42584-001	FOCUS PACK		
	7	SDSA4015Z	BIND HEAD SCREW	(×2)	
	8	------------	CONVERGENCE PWB	SKB-8001A	
	9	CM35709-001-A	CONVER FRAME	(×3)	
	10	SBSB4012Z	TAPPING SCREW	(×6)	
	11	CN30308-001	FRONT BOARD		
	12	CM49039-002	PB EDGE SPACER	(×6)	
	13	GBSA4018M	TAP SCREW	(×2)	
	14	CN20359-A0A	SPK GRILL		
	15	CM48228-001	BRAND MARK		
	16	NSS3000P	PUSH NUT	(×2)	
	17	CM36390-001	SCREEN FRAME(T,B	)(×2)	
	18	CM36390-002	SCREEN FRAME(R,L	)(×2)	
	19	CM36389-00A	SCREEN ASSY		
	30	CM12790-B01-VA	CONTROL BASE		
	31	CM36405-001-H	CONTROL SHEET		
	32	CM23008-001-A	DOOR		
	33	CM45436-00A	DOOR LATCH		
	34	CM36406-001-A	PW KNOB		
	35	CM30861-076	SPRING		
	36	GBSB4012Z	TAPPING SCREW	(×2)	
	37	CM47861-A01-H	L.E.D.LENS		
	38	CM36407-004	PANEL		
	39	CM36408-A01-A	SIDE CAP	(×2)	
	40	GBSB4012Z	TAPPING SCREW	(×2)	
	41	------------	FRONT CONTROL PWB	SKB-8101A	
	42	CM36407-003	PANEL		
	100	CN10368-A0A	WOOD CABI	Inc.No.101～103	
	101	GBSA4018M	TAP SCREW	(×16)	
	102	CM36396-00A	CASTER	(×4)	
	103	CM22150-002	HAND INSULATER	(×2)	

⚠	Ref No.	Parts mane	Parts No.				Remark
			AV-61PRO	AV-61PRO-*A*	AV-61PRO-*HK*	AV-61PRO-*SC*	
⚠	23	POWER CORD	QMPK030-200-K	QMPR010-200-E2	QMPN040-200-E2	QMPR010-200-E2	
⚠	54	RATING LABEL	CM22522-026(R)	CM22522-029(R)	CM22522-028(R)	CM22522-027(R)	Model : Indicated
⚠	55	CCIB MARK	———	———	———	CM48097-002	SC only
		PLUG ADAPTER	———	CEMK002-001	———	———	Accessory
		POS LABEL	CP30976-008(R)	CP30976-011(R)	CP30976-010(R)	CP30976-009(R)	
		SEAL	———	———	———	CM48098-001	SC only

M2 EXPLODED VIEW PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
⚠	2	CE42583-002	HV DIVIDER		
	3	SDSA4015Z	BIND HEAD SCREW	(×2)	
	4	GBSA4018M	TAP SCREW	(×2)	
	5	------------	AUDIO PWB	SKB-6001A	
	6	------------	PIN JACK PB ASSY	SKB-06101A	
	7	------------	SIGNAL PWB	SKB-1001A	
	8	------------	3D Y/C SEP.MODULE	SKB-0Y001A	
	9	------------	PIP/TEXT PWB	SKB-0T001A	
	10	------------	POWER PWB	SKB-9001A	
	11	------------	DEF. PWB	SKB-2001A	
	12	CM12402-D01-V0	MAIN BASE		
⚠	13	CJ28317-00B	F B T	T2603	
	14	------------	AV TERMINAL PWB	SKB-1201A	
	15	CHGY0017-0A-YS	ANTENNA CABLE		
	16	CHGY0031-0C-N	ANT CABLE ASSY		
	17	CEGA006-001	RF SPLITTER		
	18	CM12648-B02-V0	AV BOARD		
	19	CM23009-001-H	TERMINAL SHEET		
	20	SDSB3010M	TAPPING SCREW	(×3)	
	21	SDST3012R	ASSY SCREW	(×2)	
	22	CM48140-A03-A	POWER CORD CLAMP		
⚠	**23**	**QMPK030-200-K**	**POWER CORD**	**AV-61PRO**	
⚠	**23**	**QMPR010-200-E2**	**POWER CORD**	**AV-61PRO-A,-SC**	
⚠	**23**	**QMPN040-200-E2**	**POWER CORD**	**AV-61PRO-HK**	
	24	CN20358-001	BACK BOARD		
	25	GBSA4018M	TAP SCREW	(×7)	
	26	CM30456-001	WIRE CLAMP		
	27	SDSA3516M	TAP SCREW		
	28	CM36399-001-A	UNIT BEAM	(×2)	
	29	GBSB4012Z	TAPPING SCREW		
	30	CM22765-001-A	COOLANT PAN		
	31	GBSB4012Z	TAPPING SCREW	(×2)	
	32	GBSA4018M	TAP SCREW	(×6)	
	33	CM36400-001-A	UNIT HANGER R		
	34	CM36400-002-A	UNIT HANGER L		
	35	------------	B CRT SOCKET PWB	SKB-3002A	
	36	------------	G CRT SOCKET PWB	SKB-3001A	
	37	------------	R CRT SOCKET PWB	SKB-3003A	
	38	A75034-B	P.C.MAGNET	(×3)	
	39	CE20251-00B	DEF YOKE	(×3)	
	40	61 R CRT SA	R CRT ASSY		
	41	61 G CRT SA	G CRT ASSY		
	42	61 B CRT SA	B CRT ASSY		
	43	GBSB4012Z	TAPPING SCREW	(×12)	
	44	CM36412-00A-A	LENS	(×3)	
	45	SBSG4010Z	TAP SCREW	(×12)	
	46	GBSB3008Z	TAPPING SCREW		
	47	------------	REMO-CON PWB	SKB-8102A	
	48	CM48179-001-A	RM HOLDER		
	49	CM36402-001	MIRROR		
	50	SBSB4012Z	TAPPING SCREW	(×4)	
	52	GBSA4018M	TAP SCREW	(×9)	
⚠	53	CM12789-002-A	REAR COVER		
⚠	**54**	**CM22522-026(R)**	**RATING LABEL**	**AV-61PRO**	
⚠	**54**	**CM22522-029(R)**	**RATING LABEL**	**AV-61PRO-A**	
⚠	**54**	**CM22522-027(R)**	**RATING LABEL**	**AV-61PRO-SC**	
⚠	**54**	**CM22522-028(R)**	**RATING LABEL**	**AV-61PRO-HK**	
⚠	**55**	**CM48097-002**	**CCIB MARK**	**AV-61PRO-SC ONLY**	

M1 EXPLODED VIEW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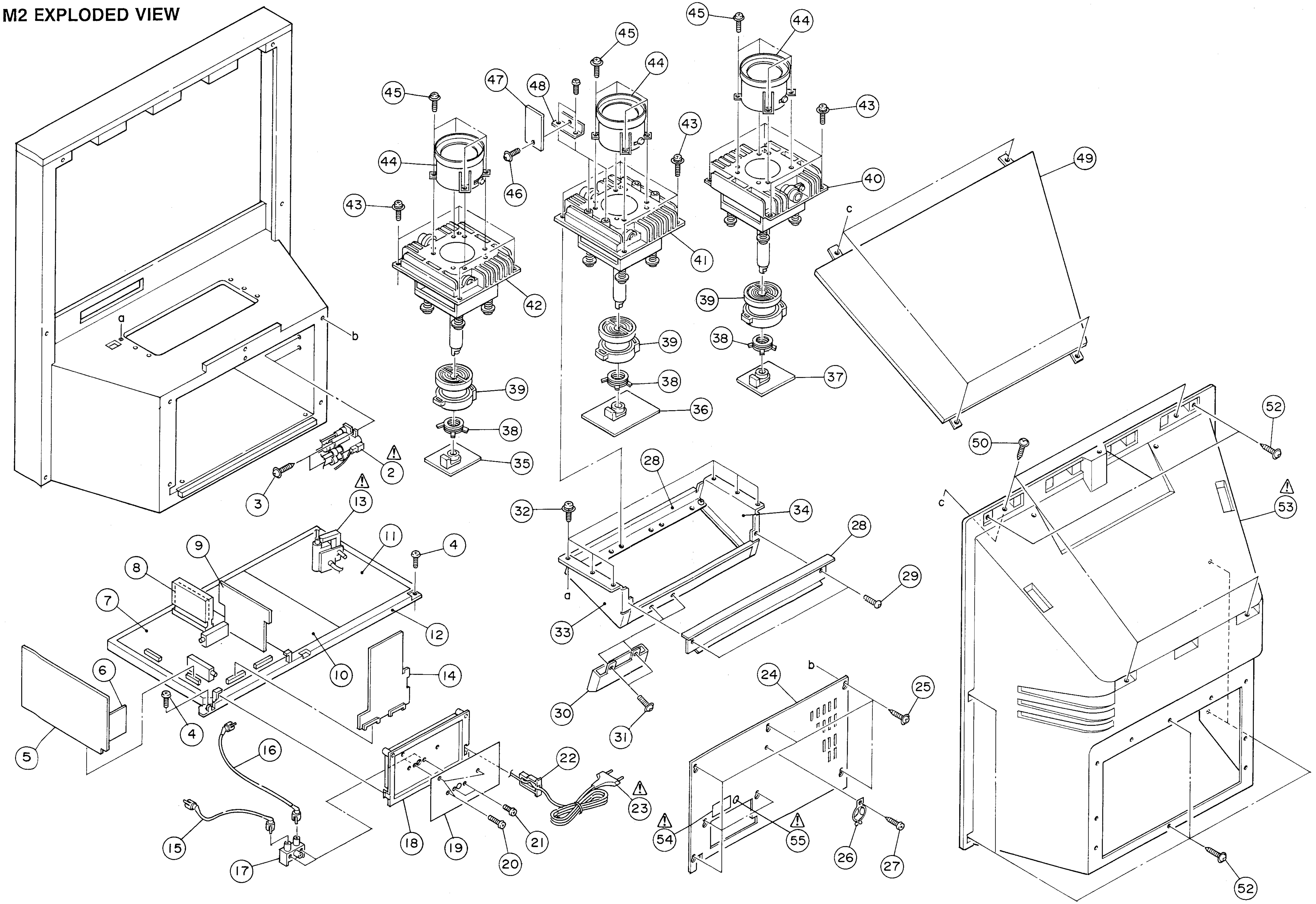
M2 EXPLODED VIEW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PRINTED WIRING BOARD ASS'Y

SIGNAL PW BOARD ASS'Y (SKB-1001A)

⚠	Symbol No.	Part No.	Part Name	Description			Local
	RESISTOR						
	R1299	QRD123J-1R0SX	C R	1 Ω	1/2W	J	
	CAPACITOR						
	C1014	NCB21HK-222AY	CHIP CAP.	2200 pF	50V	K	
	C1015-18	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1021	NCT03CH-120AY	CHIP CAP.	12 pF	1600V	H	
	C1024-25	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1027-28	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1030	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1101-08	NCB21HK-472AY	CHIP CAP.	4700 pF	50V	K	
	C1112-13	NCB21HK-472AY	CHIP CAP.	4700 pF	50V	K	
	C1114	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1121	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1125	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1142-50	NCB21HK-472AY	CHIP CAP.	4700 pF	50V	K	
	C1151-52	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1161	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1163	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1204	QEN61CM-106Z	BP E CAP.	10 μF	16V	M	
	C1206-07	QEN61CM-106Z	BP E CAP.	10 μF	16V	M	
	C1208	QETC0JM-107Z	E CAP.	100 μF	6.3V	M	
	C1210-11	QETC0JM-107Z	E CAP.	100 μF	6.3V	M	
	C1212	QEN61CM-226Z	BP E CAP.	22 μF	16V	M	
	C1214-15	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1216	NCT03CH-271AY	CHIP CAP.	270 pF	1600V	H	
	C1217	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1218	NCT03CH-151AY	CHIP CAP.	150 pF	1600V	H	
	C1219	QEN61CM-106Z	BP E CAP.	10 μF	16V	M	
	C1220	NCT03CH-271AY	CHIP CAP.	270 pF	1600V	H	
	C1221	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1224	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1225	QEN61HM-105Z	BP E CAP.	1 μF	50V	M	
	C1226	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1271	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1273-74	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1275	NCB21HK-473AY	CHIP CAP.	0.047 μF	50V	K	
	C1277	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1278	NCB21HK-473AY	CHIP CAP.	0.047 μF	50V	K	
	C1279-81	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1282	NCT03CH-390AY	CHIP CAP.	39 pF	1600V	H	
	C1283	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1302	NCF21HZ-104AY	CER.CAP.	0.1 μF	50V	Z	
	C1303	NCB21HK-102AY	CHIP CAP.	1000 pF	50V	K	
	C1305	NCB21HK-102AY	CHIP CAP.	1000 pF	50V	K	
	C1308	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1309	QFLC1HJ-224MZ	M CAP.	0.22 μF	50V	J	
	C1310-13	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1318	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1342-46	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1347-48	NCT03CH-150AY	CHIP CAP.	15 pF	1600V	H	
	C1349	NCB21HK-392AY	CHIP CAP.	3900 pF	50V	K	
	C1350	NCB21EK-104AY	CHIP CAP.	0.1 μF	25V	K	
	C1351	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1404	NCT03CH-181AY	CHIP CAP.	180 pF	1600V	H	
	C1411	QFV71HJ-104MZ	TF CAP.	0.1 μF	50V	J	
	C1562	NCB21HK-472AY	CHIP CAP.	4700 pF	50V	K	
	C1563	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1564	NCB21HK-102AY	CHIP CAP.	1000 pF	50V	K	
	C1601-02	QEN61HM-106Z	BP E CAP.	10 μF	50V	M	
	C1603	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	
	C1604	NCT03CH-820AY	CHIP CAP.	82 pF	1600V	H	
	C1606	NCT03CH-331AY	CHIP CAP.	330 pF	1600V	H	
	C1607	NCB21HK-472AY	CHIP CAP.	4700 pF	50V	K	
	C1608	NCB21HK-103AY	CHIP CAP.	0.01 μF	50V	K	

⚠ Symbol No.	Part No.	Part Name	Description			Local
CAPACITOR						
C1610	NCB21HK-222AY	CHIP CAP.	2200 pF	50V	K	
C1611	NCT03CH-101AY	CHIP CAP.	100 pF	1600V	H	
C1612	NCB21EK-683AY	CHIP CAP.	0.068 µF	25V	K	
C1613	NCB21HK-102AY	CHIP CAP.	1000 pF	50V	K	
C1614	QFV71HJ-104MZ	TF CAP.	0.1 µF	50V	J	
C1616-17	NCT03CH-270AY	CHIP CAP.	27 pF	1600V	H	
C1618	NCB21HK-103AY	CHIP CAP.	0.01 µF	50V	K	
C1619	NCT03CH-680AY	CHIP CAP.	68 pF	1600V	H	
C1620	NCT03CH-270AY	CHIP CAP.	27 pF	1600V	H	
C1621	NCT03CH-221AY	CHIP CAP.	220 pF	1600V	H	
C1622	NCB21HK-102AY	CHIP CAP.	1000 pF	50V	K	
C1623	NCB21HK-822AY	CHIP CAP.	8200 pF	50V	K	
C1624	NCB21HK-222AY	CHIP CAP.	2200 pF	50V	K	
C1626	NCB21HK-223AY	CHIP CAP.	0.022 µF	50V	K	
C1628	NCB21HK-103AY	CHIP CAP.	0.01 µF	50V	K	
C1629	NCB21HK-473AY	CHIP CAP.	0.047 µF	50V	K	
C1639	NCB21EK-104AY	CHIP CAP.	0.1 µF	25V	K	
C1640	NCT03CH-820AY	CHIP CAP.	82 pF	1600V	H	
C1641	NCB21HK-473AY	CHIP CAP.	0.047 µF	50V	K	
C1642	QFV71HJ-124MZ	TF CAP.	0.12 µF	50V	J	
C1643	NCB21HK-103AY	CHIP CAP.	0.01 µF	50V	K	
C1701	NCT03CH-820AY	CHIP CAP.	82 pF	1600V	H	
C1702	NCT03CH-680AY	CHIP CAP.	68 pF	1600V	H	
C1703	NCB21HK-102AY	CHIP CAP.	1000 pF	50V	K	
C1704	NCB21EK-104AY	CHIP CAP.	0.1 µF	25V	K	
C1706	NCT03CH-101AY	CHIP CAP.	100 pF	1600V	H	
C1707	NCB21EK-104AY	CHIP CAP.	0.1 µF	25V	K	
C1710	NCB21HK-103AY	CHIP CAP.	0.01 µF	50V	K	
C1712	NCB21EK-104AY	CHIP CAP.	0.1 µF	25V	K	
C1715	NCB21EK-104AY	CHIP CAP.	0.1 µF	25V	K	
C1723-24	NCF21HZ-104AY	CER.CAP.	0.1 µF	50V	Z	
C1910	NCB21HK-473AY	CHIP CAP.	0.047 µF	50V	K	
C1914	NCB21EK-104AY	CHIP CAP.	0.1 µF	25V	K	
C1916	NCB21EK-104AY	CHIP CAP.	0.1 µF	25V	K	
TRANSFORMER						
T1021	CELT001-301	C.WAVE TRANSF.	VCO1			
T1201	CE41360-001	DELAY LINE				
T1601	CELT003-204J3	SIF TRANSF.				
T1602	CE40123-701J3	AFC TRANSF.	AFT2			
T1603	CELT001-305	C.WAVE TRANSF.	VCO2			
T1604	CELT002-203J3	TAKE TRANSF.				
COIL						
L1001	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1003	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1021-22	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1101	CELP037-2R2	PEAKING COIL	2.2 µH			
L1102	CELP038-R82Z	PEAKING COIL	0.82 µH			
L1103	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1121	CELP026-100Z	PEAKING COIL	10 µH			
L1122	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1123	CELP026-100Z	PEAKING COIL	10 µH			
L1141	CELP037-2R2	PEAKING COIL	2.2 µH			
L1142	CELP038-R82Z	PEAKING COIL	0.82 µH			
L1143	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1161	CELP026-120Z	PEAKING COIL	12 µH			
L1162	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1163	CELP026-100Z	PEAKING COIL	10 µH			
L1271	CELP026-330Z	PEAKING COIL	33 µH			
L1601	CELP026-220Z	PEAKING COIL	22 µH			
L1602	CELP026-270Z	PEAKING COIL	27 µH			
L1603-04	CELP026-8R2Z	PEAKING COIL	8.2 µH			
L1605	CELP026-2R2Z	PEAKING COIL	2.2 µH			
L1606	CELP026-100Z	PEAKING COIL	10 µH			

⚠ Symbol No.	Part No.	Part Name	Description	Local
COIL				
L1609	CELP026-221Z	PEAKING COIL	220μH	
L1701	CELP027-8R2Z	PEAKING COIL	8.2μH	
L1702	CELP026-8R2Z	PEAKING COIL	8.2μH	
DIODE				
D1001	MA3330(L)-X	CHIP ZENER DIODE		
D1021	MA3330(L)-X	CHIP ZENER DIODE		
D1101-02	1SS85-T2	SI.DIODE		
D1121	M1MA151A-X	SI.DIODE		
D1141-42	1SS85-T2	SI.DIODE		
D1161	M1MA151A-X	SI.DIODE		
D1203-04	MA3068(M)-X	CHIP ZENER DIODE		
D1205	MA3100(M)-X	ZENER DIODE		
D1291	M1MA151A-X	SI.DIODE		
D1292	MA3051(M)-X	ZENER DIODE		
D1293	M1MA151A-X	SI.DIODE		
D1302-06	M1MA151A-X	SI.DIODE		
D1341	M1MA151A-X	SI.DIODE		
D1401-04	M1MA151A-X	SI.DIODE		
D1406	M1MA151A-X	SI.DIODE		
D1561-63	M1MA151A-X	SI.DIODE		
D1564	MA3068(M)-X	CHIP ZENER DIODE		
D1565	1SS146-T2	SI.DIODE		
D1601	MA3091(M)-X	ZENER DIODE		
D1701-02	M1MA151A-X	SI.DIODE		
D1703	MA3150(M)-X	ZENER DIODE		
D1705	M1MA151A-X	SI.DIODE		
D1706-22	MA3068(M)-X	CHIP ZENER DIODE		
D1724	MA3100(M)-X	ZENER DIODE		
D1725	M1MA151A-X	SI.DIODE		
D1901	M1MA151A-X	SI.DIODE		
TRANSISTOR				
Q1101	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1102-03	2SC5083(L-P)-T	SI.TRANSISTOR		
Q1104	DTC124EKA-X	DIGI.TRANSISTOR		
Q1105	DTC323TK-X	DIGI.TRANSISTOR		
Q1121-22	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1123	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1124-26	DTC124EKA-X	DIGI.TRANSISTOR		
Q1127-29	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1142-43	2SC5083(L-P)-T	SI.TRANSISTOR		
Q1144	DTC124EKA-X	DIGI.TRANSISTOR		
Q1161-62	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1163	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1164-66	DTC124EKA-X	DIGI.TRANSISTOR		
Q1167	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1169	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1201-02	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1203-05	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1207-08	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1209-12	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1271	DTC124EKA-X	DIGI.TRANSISTOR		
Q1291-93	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1301	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1302	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1303	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1304-08	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1309	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1310	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1311-12	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1321	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1322	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1323-24	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1401	2SC2412K(QR)-X	SI.TRANSISTOR		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	TRANSISTOR				
	Q1402	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q1404	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q1601-02	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q1603-07	2SC2412K(QR)-X	SI.TRANSISTOR		
	Q1609-11	DTC124EKA-X	DIGI.TRANSISTOR		
	Q1612	2SA1037K(QR)-X	SI.TRANSISTOR		
	IC				
	IC1201	TDA8366	I.C.(MONO-ANA)		
	IC1202	CX20125	I.C.(DIGI.OTHER)		
	IC1203	JCC1005	I.C.(MONO-ANA)		
	IC1204	M51494L	I.C.(MONO-ANA)		
	IC1205	BA7612N	I.C.(MONO-ANA)		
	IC1301	TDA4665	I.C.(MONO-ANA)		
	IC1302	TDA8395	I.C.(MONO-ANA)		
	IC1303	AN5860	I.C.(MONO-ANA)		
	IC1601	LA7577N	I.C.(MONO-ANA)		
	IC1701	M37204EC-B47SP	I C		
	IC1702	L78LR05E-MA	I.C.(MONO-ANA)		
	IC1703	AT24C08-61PRO	I.C.(EP-ROM)		
	IC1903	KIA7805PI	I.C.(MONO-ANA)		
	IC1904	AN7805F	I.C.(MONO-ANA)		
	IC1905	KIA7808PI	I.C.(MONO-ANA)		
	IC1906	KIA7812PI	I.C.(MONO-ANA)		
	IC1907	KIA7805PI	I.C.(MONO-ANA)		
	IC1908-09	KIA7812PI	I.C.(MONO-ANA)		
	IC1921	AN78L09-Y	I.C.(MONO-ANA)		
	OTHERS				
		CEMS007-008	I.C.SOCKET		
		CEMS009-064	IC SOCKET		
	CF1101	MKT39.5MA100P	CERAMIC FILTER		
	CF1102	MKT30.9MA100P	CERAMIC FILTER		
	CF1103	MKT33.5MA100P	CERAMIC FILTER		
	CF1104	MKT32.5MA100P	CERAMIC TRAP		
	CF1121	EFCWS4504A	CERAMIC FILTER		
	CF1122	TPS5.5MW	CERAMIC FILTER		
	CF1123	TPSH6.0MB	CERAMIC FILTER		
	CF1124	TPS6.5MB	CERAMIC FILTER		
	CF1141	MKT39.5MA100P	CERAMIC FILTER		
	CF1142	MKT30.9MA100P	CERAMIC FILTER		
	CF1161	EFCWS4504A	CERAMIC FILTER		
	CF1162	TPS5.5MW	CERAMIC FILTER		
	CF1163	TPSH6.0MB	CERAMIC FILTER		
	CF1164	TPS6.5MB	CERAMIC FILTER		
	CF1601	A75088-C	CERAMIC FILTER		
	CF1602	A75417-C	CERAMIC FILTER		
	CF1603	A75111-C	CERAMIC FILTER		
	CF1604	A74603-C	CERAMIC FILTER		
	CF1605	A75111-C	CERAMIC FILTER		
	CF1606	CSA1.500MK2	CERAMIC FILTER		
	CF1607	CSB512J908	CER.RESONATOR		
	DL1201	CE42099-003	DELAY LINE		
	DL1301-02	CE42636-001	D L		
	EF1001	CE42482-103Y	EMI FILTER		
	K1001-04	CE42050-001Z	CORE		
	K1005-07	CE41433-001Z	BEADS CORE		
⚠	R1606	QRZ0054-470M	F R	47 Ω 1/4W J	
	SF1101	CE41099-601	SAW FILTER		
	SF1141	CE41099-601	SAW FILTER		
	TU1001-02	CEEU534-A01	U/V E TUNER		
	X1341	CE40749-001	CRYSTAL		
	X1342	CE40668-001	CRYSTAL		
	X1701	CST8.00MTW	CER.RESONATOR		

AV TERMINAL PW BOARD ASS'Y (SKB-1201A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
CAPACITOR				
C1101-06	NCS21HJ-101AY	CHIP CAP.	100 pF 50V J	
C1107-10	NCS21HJ-271AY	CHIP C CAP.	270 pF 50V J	
C1112	QEKC1CM-226GMZ	E CAP.	22 µF 16V M	
C1113-14	NCS21HJ-101AY	CHIP CAP.	100 pF 50V J	
C1115-16	QEKC1CM-107MZ	E CAP.	100 µF 16V M	
C1118	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V K	
C1121-22	QEKC1CM-106GMZ	E CAP.	10 µF 16V M	
C1123-24	QEKC1HM-105GMZ	E CAP.	1 µF 50V M	
C1125	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V K	
C1126-27	QEKC1CM-106GMZ	E CAP.	10 µF 16V M	
C1128-29	QEKC1HM-105GMZ	E CAP.	1 µF 50V M	
C1130	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V K	
C1131	QEKC1CM-106GMZ	E CAP.	10 µF 16V M	
C1132-33	QEKC1HM-105GMZ	E CAP.	1 µF 50V M	
C1135	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V K	
C1136-37	QEKC1CM-106GMZ	E CAP.	10 µF 16V M	
C1138	QEP61CM-336MZ	BP E CAP.	33 µF 16V M	
C1139	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V K	
C1141	NCT03CH-560AY	CHIP CAP.	56 pF 1600V H	
C1142	NCT03CH-6R0AY	CHIP CAP.	6 pF 1600V H	
C1143-44	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V K	
C1145	QEKC1CM-106GMZ	E CAP.	10 µF 16V M	
C1146	QEKC1HM-105GMZ	E CAP.	1 µF 50V M	
C1147	QEKC1CM-106GMZ	E CAP.	10 µF 16V M	
C1148	QEKC1HM-105GMZ	E CAP.	1 µF 50V M	
C1150-51	NCB21HK-103AY	CHIP CAP.	0.01 µF 50V K	
C1172	QEU61AM-108MZ	E CAP.	1000 µF 10V M	
C1207-08	QEKC1HM-105GMZ	E CAP.	1 µF 50V M	
COIL				
L1101	CELP026-560Z	PEAKING COIL	56 µH	
DIODE				
D1101-07	MTZJ10(A)-T2	ZENER DIODE		
D1110-12	MTZJ10(A)-T2	ZENER DIODE		
D1117	MTZJ10(A)-T2	ZENER DIODE		
D1121-26	MTZJ10(A)-T2	ZENER DIODE		
D1201-02	MTZJ10(A)-T2	ZENER DIODE		
TRANSISTOR				
Q1102-04	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1105-06	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1107	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1108	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1109-10	2SC2412K(QR)-X	SI.TRANSISTOR		
Q1403	2SA1037K(QR)-X	SI.TRANSISTOR		
Q1405-06	DTC363TK-X	DIGI.TRANSISTOR		
IC				
IC1101	CXA1845Q	I.C.(MONO-ANA)		
IC1102	KIA7809PI	I.C.(MONO-ANA)		
OTHERS				
J1001	CEMN073-001	PIN JACK		
J1002	QMCC008-C01	DIN JACK		
J1003	CEMN073-001	PIN JACK		
J1004	QMCC008-C01	DIN JACK		
J1005	CEMN073-001	PIN JACK		
J1006	CEMN045-001	PIN JACK		

DEF.PW BOARD ASS'Y (SKB-2001A)

⚠	Symbol No.	Part No.	Part Name	Description			Local
	RESISTOR						
	R2105	QRV141F-5621AY	MF R	5.62kΩ	1/4W	F	
	R2110-11	QRD129J-1R0S	C R	1 Ω	1/2W	J	
	R2116-17	QRG019J-273S	OM R	27kΩ	1W	J	
	R2118	QRG019J-153S	OM R	15kΩ	1W	J	
	R2505-06	QRG039J-822	OM R	8.2kΩ	3W	J	
	R2511	QRG019J-682S	OM R	6.8kΩ	1W	J	
⚠	R2517	QRD129J-1R0S	C R	1 Ω	1/2W	J	
⚠	R2518	QRD129J-1R0S	C R	1 Ω	1/2W	J	
	R2564	QRD129J-562S	C R	5.6kΩ	1/2W	J	
	R2565	QRG039J-100	OM R	10 Ω	3W	J	
⚠	R2580	QRD129J-1R0S	C R	1 Ω	1/2W	J	
⚠	R2581	QRD129J-1R0S	C R	1 Ω	1/2W	J	
⚠	R2582	QRD129J-1R0S	C R	1 Ω	1/2W	J	
	R2586	QRD129J-561S	C R	560 Ω	1/2W	J	
	R2612-13	QRG039J-472	OM R	4.7kΩ	3W	J	
	R2622	QRV141F-1401AY	MF R	1.4kΩ	1/4W	F	
	R2629	QRZ0103-016	NETW.R				
	R2635	QRV141F-1401AY	MF R	1.4kΩ	1/4W	F	
	R2637	QRZ0103-016	NETW.R				
	R2638	QRD129J-1R0S	C R	1 Ω	1/2W	J	
	R2911	QRF076J-100	UNF R	10 Ω	7W	J	
	R2919	QRG039J-104A	OM R	100kΩ	3W	J	
⚠	R2921	QRD149J-122S	C R	1.2kΩ	1/4W	J	
⚠	R2922	QRD149J-221S	C R	220 Ω	1/4W	J	
	R2925	QRM059K-R22	MP R	0.22 Ω	5W	K	
	R2941	QRX019J-2R2S	MF R	2.2 Ω	1W	J	
	R2945	QRD129J-2R2S	C R	2.2 Ω	1/2W	J	
⚠	R2948	QRD149J-102S	C R	1kΩ	1/4W	J	
	R2952	QRD149J-101S	C R	100 Ω	1/4W	J	
	R2953	QRG019J-223S	OM R	22kΩ	1W	J	
	R2966	QRG039J-104A	OM R	100kΩ	3W	J	
	CAPACITOR						
	C2109	QETC0JM-107Z	E CAP.	100 μF	6.3V	M	
	C2111	QETB2CM-227	E CAP.	220 μF	160V	M	
	C2401	QFLC2AJ-104MZ	M CAP.	0.1 μF	100V	J	
	C2503	QETC2CM-105Z	E CAP.	1 μF	160V	M	
⚠	C2504	QFZ0117-6001S	M P P CAP.	6000 pF			
⚠	C2505	QFZ0117-5501S	M P P CAP.	5500 pF			
	C2507	QFP32GJ-223M	PP CAP.	0.022 μF	400V	J	
	C2508	QEZ0231-475Z	E CAP.	4.7 μF			
	C2509	QFZ0082-501S	M P P CAP.	500 pF			
	C2511	QFV71HJ-104MZ	TF CAP.	0.1 μF	50V	J	
	C2512	QFZ0119-304S	M P P CAP.	0.3 μF	200V	±3%	
	C2513	QETB2CM-107	E CAP.	100 μF	160V	M	
	C2514	QFZ0119-204S	M P P CAP.	0.2 μF	200V	±3%	
	C2515	QETC2EM-225Z	E CAP.	2.2 μF	250V	M	
	C2517	QEZ0150-127R	E CAP.	120 μF	250V	M	
	C2554	QETC1VM-476Z	E CAP.	47 μF	35V	M	
	C2581	QETB2EM-336	E CAP.	33 μF	250V	M	
	C2582	QETC1JM-107Z	E CAP.	100 μF	63V	M	
	C2584	QETB1VM-228	E CAP.	2200 μF	35V	M	
	C2586	QFZ0081-1002S	M P P CAP.	10 pF	1600V	±3%	
	C2601	QEN61HM-335Z	BP E CAP.	3.3 μF	50V	M	
	C2605	QETC2CM-105Z	E CAP.	1 μF	160V	M	
⚠	C2606	QFZ0117-5501S	M PP CAP.	5500 pF			
⚠	C2607	QFZ0117-5501S	M PP CAP.	5500 pF			
⚠	C2608	QFZ0119-564S	M PP CAP.	0.56 μF	200V	±3%	
	C2609	QEZ0097-106R	E CAP.	10 μF	160V	M	
	C2620	QFLC1HJ-103MZ	M CAP.	0.01 μF	50V	J	
	C2621	QEN61HM-476Z	BP E CAP.	47 μF	50V	M	
	C2624	QEN61HM-105Z	BP E CAP.	1 μF	50V	M	
	C2627	QFV71HJ-334MZ	TF CAP.	0.33 μF	50V	J	
	C2629	QFLC1HJ-562MZ	M CAP.	5600 pF	50V	J	
	C2632	QEN61HM-105Z	BP E CAP.	1 μF	50V	M	

⚠	Symbol No.	Part No.	Part Name	Description	Local
	CAPACITOR				
	C2634	QFV71HJ-684MZ	TF CAP.	0.68 μ F 50V J	
⚠	C2913	QCZ9033-222A	C CAP.	2200 p FAC400V M	
⚠	C2914	QCZ9033-222A	C CAP.	2200 p FAC400V M	
	C2915-16	QEZ0110-108R	E CAP.	1000 μ F	
	C2917	QEZ0199-127	E CAP.	120 μ F	
	C2918	QFH52GK-223M	MM CAP.	0.022 μ F 400V K	
	C2920	QETC2WM-225Z	E CAP.	2.2 μ F 450V M	
	C2921	QFLC2AJ-104MZ	M CAP.	0.1 μ F 100V J	
	C2922	QFH62GK-473M	MM CAP.	0.047 μ F 400V K	
	C2926	QCZ9033-103A	C CAP.	0.01 μ FAC400V P	
	C2927	QCZ0122-471A	C CAP.	470 p F 2000V K	
	C2928	QCZ0131-102A	C CAP.	1000 p F 2000V K	
	C2929	QFLC1HJ-392MZ	M CAP.	3900 p F 50V J	
	C2931	QFLC1HJ-563MZ	M CAP.	0.056 μ F 50V J	
	C2940	QCZ9033-103A	C CAP.	0.1 μ FAC400V P	
⚠	C2950	QCZ9041-222A	C CAP.	2200 p FAC400V K	
	C2952	QETC1VM-477Z	E CAP.	470 μ F 35V M	
	C2953	QETB1VM-228	E CAP.	2200 μ F 35V M	
	C2955	QETC1VM-477Z	E CAP.	470 μ F 35V M	
	C2956	QETB1VM-228	E CAP.	2200 μ F 35V M	
	C2958	QEHB1EM-478M	E CAP.	4700 μ F 25V M	
	C2961	QEHB1HM-477M	E CAP.	470 μ F 50V M	
	C2964	QEHB1HM-477M	E CAP.	470 μ F 50V M	
	C2967	QEH72CM-337M	E CAP.	330 μ F 160V M	
	C2968	QETB2CM-227	E CAP.	220 μ F 160V M	
	C2980	QETC1VM-227Z	E CAP.	220 μ F 35V M	
	C2990	QEN61VM-475Z	BP E CAP.	4.7 μ F 35V M	
	TRANSFORMER				
	T2501	CE42034-001	H.DRIVE TRANSF.		
⚠	T2502	CE42580-001	H.O.T		
	T2601	CE42034-001	H.DRIVE TRANSF.		
	T2602	CE42502-001J1	DUMMY YOKE		
⚠	T2603	CJ28317-00B	F B T		
⚠	T2911	CETS054-001J2	SW TRANSF.		
⚠	T2912	CE42590-001J1	STARTOR TRANSF.		
	COIL				
	L2503	CELC052-821	CHOKE COIL		
	L2581	CJ30030-015	HEATER CHOKE		
	L2582	CELL001-003	LINIARITY COIL		
	L2951-57	CJ30030-050	HEATER CHOKE		
	DIODE				
	D2101	RD12ES(B3)-T2	ZENER DIODE		
	D2102	EU2A-LFF4	SI.DIODE		
	D2103	SLR-342VC3F	L.E.D.		
	D2104	HZ18-2L-T2	ZENER DIODE		
	D2105-06	1SS133-T2	SI.DIODE		
	D2107	MA4180(M)-T2	ZENER DIODE		
	D2108	1SS133-T2	SI.DIODE		
	D2109	1SS82-T2	SI.DIODE		
	D2110	EU2A-LFF4	SI.DIODE		
	D2501	ERD08M-15	SI.DIODE		
	D2502-03	RU4AM-C1	SI.DIODE		
	D2504	1SS133-T2	SI.DIODE		
	D2505	1SS82-T2	SI.DIODE		
	D2506	EU2A-T3	SI.DIODE		
	D2507	EU2A-LFF4	SI.DIODE		
	D2509	V11CA-C1	SI.DIODE		
	D2510	EU2A-LFG2	SI.DIODE		
	D2511	1SS133-T2	SI.DIODE		
	D2521	MA4330(M)-T2	ZENER DIODE		
	D2531	RH1S-LFA1	SI.DIODE		
	D2532-33	RU3AM-LFC4	SI.DIODE		
	D2551	RD6.8ES(B3)-T2	ZENER DIODE		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	DIODE				
	D2552	1SS133-T2	SI.DIODE		
	D2601	ERD07-15-L	SI.DIODE		
	D2621	1SS133-T2	SI.DIODE		
	D2622	HZ5C1(C1)-T2	ZENER DIODE		
	D2623	HZ6A1L-T2	ZENER DIODE		
	D2624	RD12ES(B)-T2	ZENER DIODE		
	D2625	RD33E(B1)-T2	ZENER DIODE		
	D2627	1SS133-T2	SI.DIODE		
	D2628	HZ5C1(C1)-T2	ZENER DIODE		
	D2629	1S2473H-T2	SI.DIODE		
⚠	D2911	RBV-406M	BRIDGE DIODE		
	D2912	SM8JZ47A	TRIAC		
	D2913-14	RM1C-T3	SI.DIODE		
	D2915-16	K1V26-C1	THYRISTOR		
	D2917-18	EU2A-T3	SI.DIODE		
	D2919	RU4C-C1	SI.DIODE		
	D2940	EU2A-T3	SI.DIODE		
	D2941	1SS133-T2	SI.DIODE		
	D2942	MTZJ6.8(A)-T2	ZENER DIODE		
	D2943	1SS119-T2	SI.DIODE		
	D2951-52	RL2Z-LFC4	SI.DIODE		
	D2953-55	D4L20U	SI.DIODE		
	D2956	D5L60	SI.DIODE		
	D2957	EU2A-T3	SI.DIODE		
	D2959-64	1SS133-T2	SI.DIODE		
	D2965-66	EU2A-T3	SI.DIODE		
	D2967-69	1SS133-T2	SI.DIODE		
	D2970	MTZJ9.1(C)-T2	ZENER DIODE		
	D2971	1SS133-T2	SI.DIODE		
	TRANSISTOR				
	Q2101	2SD1090	SI.TRANSISTOR		
	Q2102	2SC1573(PQR)	SI.TRANSISTOR		
	Q2103	2SA949(Y)C1-T	SI.TRANSISTOR		
	Q2104	2SC1573(PQR)	SI.TRANSISTOR		
	Q2105-06	2SC2229(Y)-T	SI.TRANSISTOR		
	Q2107	SF0R1A42-T	S C R		
	Q2502	2SA933S(QR)-T	SI.TRANSISTOR		
	Q2503	2SC2653-RL	SI.TRANSISTOR		
⚠	Q2504	2SD2348-LB	SI.TRANSISTOR		
	Q2551	2SD1266A(QP)	SI.TRANSISTOR		
	Q2601	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q2602-03	2SA933S(QR)-T	SI.TRANSISTOR		
	Q2604	2SC2653-RL	SI.TRANSISTOR		
⚠	Q2605	2SD2348-LB	SI.TRANSISTOR		
	Q2606-07	DTC124ES-T	DIGI.TRANSISTOR		
	Q2608	2SA933AS(QR)-T	SI.TRANSISTOR		
	Q2911	2SC3751(KLM)	SI.TRANSISTOR		
	Q2912	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q2913	2SA1309A(QR)-T	SI.TRANSISTOR		
	Q2952	2SC2229(Y)-T	SI.TRANSISTOR		
	Q2953	2SA1309A(QR)-T	SI.TRANSISTOR		
	Q2954	2SC3311A(QR)-T	SI.TRANSISTOR		
	Q2955-56	DTC114YS-T	DIGI.TRANSISTOR		
	Q2957	DTC114ES-T	DIGI.TRANSISTOR		
	Q2958	DTC143XS-T	DIGI.TRANSISTOR		
	IC				
	IC2102	TA7812S	I.C.(MONO-ANA)		
	IC2503	UPC358C	I.C.(MONO-ANA)		
	IC2551	UPC4558C	I.C.(MONO-ANA)		
	IC2601-02	UPC358C	I.C.(MONO-ANA)		
	IC2911	STK73909	SW REG IC		
	IC2912	STR81145A	I.C.		
⚠	IC2913	TLP721F(GR)	I.C.(PH.COUPLER)		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	IC				
⚠	IC2914	TLP721F(GR)	I.C.(PH.COUPLER)		
	IC2951	SE130N	I.C.(H)		
	IC2952	TA7812S	I.C.(MONO-ANA)		
	OTHERS				
⚠	FR2926	QRZ0054-2R2M	F R	2.2 Ω 1/2W J	
	K2911-12	CE42050-001Z	CORE		
	K2951-52	CE41433-001Z	BEADS CORE		
	K2953	CE41724-00A	BEADS CORE		
	K2954-56	CE42050-001Z	CORE		
	K2959-61	CE42050-001Z	CORE		

G CRT SOCKET PW BOARD ASS'Y (SKB-3001A)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	RESISTOR				
	R3156	QRG029J-153	OM R	15kΩ 2W J	
	R3157	QRG029J-183	OM R	18kΩ 2W J	
	R3158	QRG029J-153	OM R	15kΩ 2W J	
	R3159	QRG029J-183	OM R	18kΩ 2W J	
	R3160	QRG029J-153	OM R	15kΩ 2W J	
	R3161	QRG029J-183	OM R	18kΩ 2W J	
⚠	R3173	QRD14CJ-102SX	C R	1kΩ 1/4W J	
⚠	R3174	QRD14CJ-102SX	C R	1kΩ 1/4W J	
⚠	R3175	QRD14CJ-102SX	C R	1kΩ 1/4W J	
	CAPACITOR				
	C3104	NCT03CH-560AY	CHIP CAP.	56pF 1600V H	
	C3113	QETC2EM-106Z	E CAP.	10μF 250V M	
	C3114	QFZ0097-103M	M M CAP.	0.01μF	
	C3115-16	QETC2EM-475Z	E CAP.	4.7μF 250V M	
	COIL				
	L3101-03	CELP026-470Z	PEAKING COIL	47μH	
	L3104	CELP026-180Z	PEAKING COIL	18μH	
	DIODE				
	D3101-03	MA165-T2	SI.DIODE		
	D3104-06	1SS244-T2	SI.DIODE		
	D3107-09	1SS133-T2	SI.DIODE		
	D3111	1SS133-T2	SI.DIODE		
	D3113	TVR4J-T3	SI.DIODE		
	D3114-19	1SS120-T2	SI.DIODE		
	TRANSISTOR				
	Q3104	2SA1321-T	SI.TRANSISTOR		
	Q3105	2SC3334-T	SI.TRANSISTOR		
	Q3106	2SA1321-T	SI.TRANSISTOR		
	Q3107	2SC3334-T	SI.TRANSISTOR		
	Q3108	2SA1321-T	SI.TRANSISTOR		
	Q3109	2SC3334-T	SI.TRANSISTOR		
	Q3110	2SC2412K(QR)-X	SI.TRANSISTOR		
	Q3111	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q3112-13	2SC2412K(QR)-X	SI.TRANSISTOR		
	Q3114	2SC4544-C1	SI.TRANSISTOR		
	Q3115	2SC4502-T	SI.TRANSISTOR		
	Q3116	2SC4544-C1	SI.TRANSISTOR		
	Q3117	2SC4502-T	SI.TRANSISTOR		
	Q3118	2SC4544-C1	SI.TRANSISTOR		
	Q3119	2SC4502-T	SI.TRANSISTOR		
	OTHERS				
	SG3101	CE42447-501	ARRESTOR		
⚠	SK3101	CE42535-001	C.R.T.SOCKET		
	VA3101	ERZ-C05ZJ361	VARISTOR	360V	

B CRT SOCKET PW BOARD ASS'Y (SKB-3002A)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	CAPACITOR				
	C3201	QFZ0097-103M	M M CAP.	0.01 μF 1250V K	
	COIL				
	L3201	CELP026-180Z	PEAKING COIL	18 μH	
	OTHERS				
	SG3201	CE42447-501	ARRESTOR		
⚠	SK3201	CE42535-001	C.R.T.SOCKET		
	VA3201	ERZ-C05ZJ361	VARISTOR	360V	

R CRT SOCKET PW BOARD ASS'Y (SKB-3003A)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	CAPACITOR				
	C3301	QFP32GK-563M	PP CAP.	0.056 μF 400V K	
	C3302	QFZ0097-103M	M M CAP.	0.01 μF 1250V K	
	COIL				
	L3301	CELP026-180Z	PEAKING COIL	18 μH	
	OTHERS				
	SG3301	CE42447-501	ARRESTOR		
⚠	SK3301	CE42535-001	C.R.T.SOCKET		
	VA3301	ERZ-C05ZJ361	VARISTOR	360V	

PIN JACK PW BOARD ASS'Y (SKB-06101A)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	OTHERS				
	J6001	CEMN045-004	PIN JACK		
	J6002	CEMN090-002	PIN JACK		

AUDIO PW BOARD ASS'Y (SKB-6001A)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	RESISTOR				
	R6405	QRD149J-1R0S	C R	1 Ω 1/4W J	
	R6617	QRD149J-2R2S	C R	2.2 Ω 1/4W J	
	R6624	QRD149J-2R2S	C R	2.2 Ω 1/4W J	
	R6637-38	QRG029J-471	OM R	470 Ω 2W J	
⚠	R6661	QRSA08J-122YL	CHIP MG R	1.2k Ω 1/10W J	
	R6709	QRD149J-4R7S	C R	4.7 Ω 1/4W J	
⚠	R6720	QRD149J-4R7S	C R	4.7 Ω 1/4W J	
⚠	R6721	QRD149J-4R7S	C R	4.7 Ω 1/4W J	
	R6901	QRG019J-470S	OM R	47 Ω 1W J	
	R6904	QRD149J-121S	C R	120 Ω 1/4W J	
	R6912	QRD149J-1R0S	C R	1 Ω 1/4W J	
	CAPACITOR				
	C6101	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6103-04	NCB21HK-472AY	CHIP CAP.	4700 pF 50V K	
	C6105-09	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6110	NCB21HK-331AY	CHIP CAP.	330 pF 50V K	
	C6112	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6114-15	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6117	NCB21HK-472AY	CHIP CAP.	4700 pF 50V K	
	C6118	NCT03CH-820AY	CHIP CAP.	82 pF 1600V H	
	C6119	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
	C6120	NCT03CH-180AY	CHIP CAP.	18 pF 1600V H	
	C6122	NCT03CH-330AY	CHIP CAP.	33 pF 1600V H	
	C6123	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6124	NCB21HK-682AY	CHIP CAP.	6800 pF 50V K	
	C6125	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
	C6126-27	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6128	NCT03CH-680AY	CHIP CAP.	68 pF 1600V H	
	C6132	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6133-35	QFLC1HK-103MZ	M CAP.	0.01 μF 50V K	
	C6136	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6151	NCT03CH-101AY	CHIP CAP.	100 pF 1600V H	
	C6152	NCT03CH-270AY	CHIP CAP.	27 pF 1600V H	
	C6153-54	NCT03CH-2R0AY	CHIP CAP.	2 pF 1600V H	
	C6155-56	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6159-60	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
	C6162	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
	C6163-64	NCS21HJ-471AY	CER.CAP.	470 pF 50V J	
	C6165	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
	C6168	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
	C6171-72	NCS21HJ-221AY	CER.CAP.	220 pF 50V J	
	C6173	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
	C6174-75	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6176-77	NCS21HJ-391AY	CER.CAP.	390 pF 50V J	
	C6178	NCB21HK-102AY	CHIP CAP.	1000 pF 50V K	
	C6181	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6182-83	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
	C6184-99	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
	C6203-04	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
	C6233-34	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
	C6253-54	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
	C6403-04	NCB21HK-272AY	CHIP CAP.	2700 pF 50V K	
	C6407-10	NCF21EZ-104AY	CHIP C CAP.	0.1 μF 25V Z	
	C6413-14	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
	C6433	NCB21HK-272AY	CHIP CAP.	2700 pF 50V K	
	C6436-37	NCF21EZ-104AY	CHIP C CAP.	0.1 μF 25V Z	
	C6503-04	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
	C6532	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
	C6553-54	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
	C6601-02	QETB1VM-228	E CAP.	2200 μF 35V M	
	C6603-04	NCF21EZ-104AY	CHIP C CAP.	0.1 μF 25V Z	
	C6608-09	QFV71HJ-684MZ	TF CAP.	0.68 μF 50V J	
	C6610-11	NCF21EZ-104AY	CHIP C CAP.	0.1 μF 25V Z	
	C6615-16	QFV71HJ-684MZ	TF CAP.	0.68 μF 50V J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
CAPACITOR				
C6623	NCF21CZ-105AY	CER.CAP.	1 μF 16V Z	
C6652-55	QEN61HM-105Z	BP E CAP.	1 μF 50V M	
C6664-65	NCB21HK-102AY	CHIP CAP.	1000 pF 50V K	
C6670-71	NCB21EK-104AY	CHIP CAP.	0.1 μF 25V K	
C6702	NCT03CH-680AY	CHIP CAP.	68 pF 1600V H	
C6704	NCB21HK-473AY	CHIP CAP.	0.047 μF 50V K	
C6705	NCB21HK-223AY	CHIP CAP.	0.022 μF 50V K	
C6706	NCB21HK-102AY	CHIP CAP.	1000 pF 50V K	
C6708	NCB21HK-473AY	CHIP CAP.	0.047 μF 50V K	
C6710	NCT03CH-680AY	CHIP CAP.	68 pF 1600V H	
C6711	NCB21HK-473AY	CHIP CAP.	0.047 μF 50V K	
C6715	NCB21HK-473AY	CHIP CAP.	0.047 μF 50V K	
C6716	NCF21EZ-104AY	CHIP C CAP.	0.1 μF 25V Z	
C6717	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
C6719	NCB21EK-563AY	CHIP CAP.	0.056 μF 25V K	
C6722-23	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
C6724	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
C6726	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
C6730	NCF21CZ-105AY	CER.CAP.	1 μF 16V Z	
C6733-34	QFLC1HK-102MZ	M CAP.	1000 pF 50V K	
C6736	NCF21CZ-105AY	CER.CAP.	1 μF 16V Z	
C6738-39	QFLC1HK-102MZ	M CAP.	1000 pF 50V K	
C6755-72	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
C6773	NCB21HK-473AY	CHIP CAP.	0.047 μF 50V K	
C6774-78	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
C6780-86	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
C6905-06	NCF21EZ-104AY	CHIP C CAP.	0.1 μF 25V Z	
TRANSFORMER				
T6101	CELT001-306	C.WAVE TRANSF.		
COIL				
L6101	CELP026-1R5Z	PEAKING COIL	1.5 μH	
L6102	CELP026-100Z	PEAKING COIL	10 μH	
L6104	CELP026-100Z	PEAKING COIL	10 μH	
L6105	CELP026-150Z	PEAKING COIL	15 μH	
L6106	CELP026-180Z	PEAKING COIL	18 μH	
L6107	CELP026-100Z	PEAKING COIL	10 μH	
L6152-54	CELP026-4R7Z	PEAKING COIL	4.7 μH	
L6156	CE40344-4R7YL	INDUCTOR		
L6571-75	CELP026-4R7Z	PEAKING COIL	4.7 μH	
L6576	CE41832-001	LEAD CORE		
L6703-06	CE40344-4R7YL	INDUCTOR		
L6912	CE40344-4R7YL	INDUCTOR		
DIODE				
D6101-02	1SS85-T5	SI.DIODE		
D6103	MA3091(M)-X	ZENER DIODE		
D6201	MA3062-X	ZENER DIODE		
D6251	MA3062-X	ZENER DIODE		
D6501-02	MA3150(M)-X	ZENER DIODE		
D6503	MA3056-X	ZENER DIODE		
D6531	MA3056-X	ZENER DIODE		
D6532	MA3150(M)-X	ZENER DIODE		
D6551	MA3056-X	ZENER DIODE		
D6552-53	MA3150(M)-X	ZENER DIODE		
D6601-02	M1MA151K-X	CHIP DIODE		
D6603	MTZJ5.1(B)-T2	ZENER DIODE		
D6604	M1MA151K-X	CHIP DIODE		
D6605-08	MTZJ27(B)-T2	ZENER DIODE		
D6611-15	M1MA151K-X	CHIP DIODE		
D6616-17	M1MA151K-X	SI.DIODE		
D6651	MA3039(H)-X	ZENER DIODE		
D6652-53	MA3062(M)-X	CHIP ZENER DIODE		
D6654	MA3030(H)-X	ZENER DIODE		
D6702-04	MA141WK-X	CHIP DIODE		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	TRANSISTOR				
	Q6101	2SC5083(L-P)-T	SI.TRANSISTOR		
	Q6102-03	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q6104	DTC323TK-X	DIGI.TRANSISTOR		
	Q6105-07	2SC2412K(QR)-X	SI.TRANSISTOR		
	Q6201	DTC144EK-X	DIGI.TRANSISTOR		
	Q6301-02	DTC144EK-X	DIGI.TRANSISTOR		
	Q6501	2SA1162(YG)-X	CHIP TRANSISTOR		
	Q6502-03	DTC323TK-X	DIGI.TRANSISTOR		
	Q6531	2SA1162(YG)-X	CHIP TRANSISTOR		
	Q6532	DTC323TK-X	DIGI.TRANSISTOR		
	Q6551	2SA1162(YG)-X	CHIP TRANSISTOR		
	Q6552-53	DTC323TK-X	DIGI.TRANSISTOR		
	Q6601	DTC144EK-X	DIGI.TRANSISTOR		
	Q6602	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q6603	DTC323TK-X	DIGI.TRANSISTOR		
	Q6604	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q6605-06	DTC323TK-X	DIGI.TRANSISTOR		
	Q6607	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q6608	2SC2412K(QR)-X	SI.TRANSISTOR		
	Q6651	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q6652-54	DTC323TK-X	DIGI.TRANSISTOR		
	Q6655	2SC2655(Y)-T	SI.TRANSISTOR		
	Q6656	DTC323TK-X	DIGI.TRANSISTOR		
	Q6701	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q6911	2SK105(E)-T	F.E.T.		
	Q6912	2SC2655(Y)-T	SI.TRANSISTOR		
	IC				
	IC6101	LA7577N	I.C.(MONO-ANA)		
	IC6151	MSP3410-SDIL	I.C.(DIGI-OTHER)		
	IC6201	M5201AFP-W	I.C.(MONO-ANA)		
	IC6231	M5201AFP-W	I.C.(MONO-ANA)		
	IC6251	BA4558F-W	I.C.(MONO-ANA)		
	IC6301-02	TC4052BF-W	I.C.(DIGI-MOS)		
	IC6401	TDA7315D	I.C.(DIGI-OTHER)		
	IC6411	AN78L09-Y	I.C.(MONO-ANA)		
	IC6431	TDA7315D	I.C.(DIGI-OTHER)		
	IC6451	TDA7315D	I.C.(DIGI-OTHER)		
	IC6501	BA4558F-W	I.C.(MONO-ANA)		
	IC6531	BA4558F-W	I.C.(MONO-ANA)		
	IC6551	BA4558F-W	I.C.(MONO-ANA)		
	IC6601-02	TDA2052V	I C		
	IC6651	TC4052BF-W	I.C.(DIGI-MOS)		
	IC6652	TA8119P	I C		
	IC6701	SAA7366T-X	I.C.(MONO-ANA)		
	IC6702	M37471M8-349SP	I.C.(MICRO-COMP)		
	IC6703	MN1382-Q-X	I.C.(MONO-ANA)		
	IC6704	TC9332F-010	I.C.(DIGI-MOS)		
	IC6705	TC7W74F-X	I.C.(ECL-LOGIC)		
	IC6706	TMS57002DPHA	I.C.(MICRO-PROC)		
	IC6708-09	TDA1386T-X	I C		
	IC6711	BA4558F-W	I.C.(MONO-ANA)		
	IC6901-02	AN78L05-Y	I.C.(MONO-ANA)		
	OTHERS				
	CF6105	A74603-C-Z	CERAMIC FILTER		
	EF6152	CE42482-103Y	EMI FILTER		
	EF6703-04	CE42482-103Y	EMI FILTER		
	EF6707	CE42482-103Y	EMI FILTER		
⚠	FR6103	QRZ0054-330M	F R	33 Ω 1/4W J	
⚠	FR6118	QRZ0054-470M	F R	47 Ω 1/4W J	
	K6152	CE41433-001Z	BEADS CORE		
	K6701-03	CE41433-001Z	BEADS CORE		
	SF6101	CE41031-602	SAW FILTER		
	SF6102	CE41031-601	SAW FILTER		
	X6151	CE42546-001	CRYSTAL		
	X6701	CST8.00MT	CER.RESONATOR		
	X6702	CE42533-001	CRYSTAL		

CONVERGENCE PW BOARD ASS'Y (SKB-8001A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
VARIABLE RESISTOR				
R8427	QVPC611-502HZ	V R	5kΩ B GH KEY	
R8430	QVPC611-502HZ	V R	5kΩ B GH L-KEYS	
R8431	QVPC611-502HZ	V R	5kΩ B GH LIN	
R8433	QVPC611-502HZ	V R	5kΩ B GH BOW	
R8435	QVPC611-502HZ	V R	5kΩ B GH PIN BALANCE	
R8445	QVPC611-502HZ	V R	5kΩ B GH PIN	
R8476	QVPC611-502HZ	V R	5kΩ B GV KEY	
R8478	QVPC611-502HZ	V R	5kΩ B GV KEYS	
R8480	QVPC611-502HZ	V R	5kΩ B GV TB-PIN	
R8483	QVPC611-502HZ	V R	5kΩ B GV LIN	
R8484	QVPC611-502HZ	V R	5kΩ B GV BOW	
R8485	QVPC611-502HZ	V R	5kΩ B GV TOP-KEYS	
R8489	QVPC611-502HZ	V R	5kΩ B GV TOP-PIN	
R8494	QVPC611-502HZ	V R	5kΩ B GV 60 KEYS	
R8527	QVPC611-502HZ	V R	5kΩ B RH KEY	
R8528	QVPC611-502HZ	V R	5kΩ B RH KEYS	
R8530	QVPC611-502HZ	V R	5kΩ B RH L-KEYS	
R8531	QVPC611-502HZ	V R	5kΩ B RH LIN	
R8532	QVPC611-502HZ	V R	5kΩ B RH SIZE	
R8533	QVPC611-502HZ	V R	5kΩ B RH BOW	
R8535	QVPC611-502HZ	V R	5kΩ B RH PIN BALANCE	
R8539	QVPC611-502HZ	V R	5kΩ B RH R-LIN	
R8540	QVPC611-502HZ	V R	5kΩ B RH L-LIN	
R8541	QVPC611-502HZ	V R	5kΩ B 60R H.SIZE	
R8542	QVPC611-502HZ	V R	5kΩ B 60R H.LIN	
R8543	QVPC611-502HZ	V R	5kΩ B 60R H.STATIC	
R8545	QVPC611-502HZ	V R	5kΩ B RH PIN	
R8547	QVPC611-502HZ	V R	5kΩ B RV L-BOW	
R8576	QVPC611-502HZ	V R	5kΩ B RV KEY	
R8578	QVPC611-502HZ	V R	5kΩ B RV KEYS	
R8580	QVPC611-502HZ	V R	5kΩ B RV TB-PIN	
R8581	QVPC611-502HZ	V R	5kΩ B RV TOP-SIZE	
R8582	QVPC611-502HZ	V R	5kΩ B RV BOTTOM-SIZE	
R8583	QVPC611-502HZ	V R	5kΩ B RV LIN	
R8584	QVPC611-502HZ	V R	5kΩ B RV BOW	
R8585	QVPC611-502HZ	V R	5kΩ B RV TOP-KEYS	
R8589	QVPC611-502HZ	V R	5kΩ B RV TOP-PIN	
R8594	QVPC611-502HZ	V R	5kΩ B 60R V.KEY	
R8627	QVPC611-502HZ	V R	5kΩ B BH KEY	
R8628	QVPC611-502HZ	V R	5kΩ B BH KEYS	
R8630	QVPC611-502HZ	V R	5kΩ B BH L-KEYS	
R8631	QVPC611-502HZ	V R	5kΩ B BH LIN	
R8632	QVPC611-502HZ	V R	5kΩ B BH SIZE	
R8633	QVPC611-502HZ	V R	5kΩ B BH BOW	
R8635	QVPC611-502HZ	V R	5kΩ B BH PIN BALANCE	
R8639	QVPC611-502HZ	V R	5kΩ B BH R-LIN	
R8640	QVPC611-502HZ	V R	5kΩ B BH L-LIN	
R8641	QVPC611-502HZ	V R	5kΩ B 60B H.SIZE	
R8642	QVPC611-502HZ	V R	5kΩ B 60B H.LIN	
R8643	QVPC611-502HZ	V R	5kΩ B 60B H.STATIC	
R8645	QVPC611-502HZ	V R	5kΩ B 60B PIN	
R8647	QVPC611-502HZ	V R	5kΩ B BV L-BOW	
R8676	QVPC611-502HZ	V R	5kΩ B BV KEY	
R8678	QVPC611-502HZ	V R	5kΩ B BV KEYS	
R8680	QVPC611-502HZ	V R	5kΩ B BV TB-PIN	
R8681	QVPC611-502HZ	V R	5kΩ B BV TOP-SIZE	
R8682	QVPC611-502HZ	V R	5kΩ B BV BOTTOM-SIZE	
R8683	QVPC611-502HZ	V R	5kΩ B BV LIN	
R8684	QVPC611-502HZ	V R	5kΩ B BV BOW	
R8685	QVPC611-502HZ	V R	5kΩ B BV TOP-KEYS	
R8689	QVPC611-502HZ	V R	5kΩ B BV TOP-PIN	
R8694	QVPC611-502HZ	V R	5kΩ B 60B V.KEY	
R8771	QVPC611-203HZ	V R	20kΩ B RH STATIC	
R8776	QVPC611-203HZ	V R	20kΩ B RV STATIC	

⚠ Symbol No.	Part No.	Part Name	Description	Local
VARIABLE RESISTOR				
R8781	QVPC611-203HZ	V R	20kΩ B BH STATIC	
R8786	QVPC611-203HZ	V R	20kΩ B BV STATIC	
RESISTOR				
R8150	NRVA02D-2701NY	CHIP MF R	2.7kΩ 1/10W ±0.5%	
R8805	QRG039J-221A	OM R	220 Ω 3W J	
R8807	QRX039J-3R3A	MF R	3.3 Ω 3W J	
R8815	QRG039J-221A	OM R	220 Ω 3W J	
R8817	QRX039J-3R3A	MF R	3.3 Ω 3W J	
R8825	QRG039J-221A	OM R	220 Ω 3W J	
R8827	QRX039J-3R3A	MF R	3.3 Ω 3W J	
R8835	QRG039J-221A	OM R	220 Ω 3W J	
R8837	QRX039J-3R3A	MF R	3.3 Ω 3W J	
R8845	QRG039J-121A	OM R	120 Ω 3W J	
R8847	QRX039J-3R3A	MF R	3.3 Ω 3W J	
R8855	QRG039J-221A	OM R	220 Ω 3W J	
R8857	QRX039J-3R3A	MF R	3.3 Ω 3W J	
CAPACITOR				
C8102	QFLC1HJ-102MZ	M CAP.	1000 pF 50V J	
C8103	QEN61HM-335Z	BP E CAP.	3.3 μF 50V M	
C8104	QFV71HJ-224MZ	TF CAP.	0.22 μF 50V J	
C8108	QEN61HM-105Z	BP E CAP.	1 μF 50V M	
C8115	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
C8117	QFV71HJ-105MZ	TF CAP.	1 μF 50V J	
C8119	QEN61HM-225Z	BP E CAP.	2.2 μF 50V M	
C8121	QFLC1HJ-821MZ	M CAP.	820 pF 50V J	
C8122	QFV71HJ-563MZ	TF CAP.	0.056 μF 50V J	
C8123	QFV71HJ-124MZ	TF CAP.	0.12 μF 50V J	
C8126	QFV71HJ-393MZ	TF CAP.	0.039 μF 50V J	
C8140	NCT03CH-330AY	CHIP CAP.	33 pF 1600V H	
C8143	QFP31HG-152SZ	PP CAP.	1500 pF 50V G	
C8145	QFLC1HJ-123MZ	M CAP.	0.012 μF 50V J	
C8155	QFP31HG-152SZ	PP CAP.	1500 pF 50V G	
C8156	QFP31HJ-392SZ	PP CAP.	3900 pF 50V J	
C8204	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
C8309-10	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
C8701-04	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
C8707-10	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
C8721-24	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
C8725-26	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
C8728-29	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
C8731-34	NCT03CH-470AY	CHIP CAP.	47 pF 1600V H	
C8735-36	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
C8738-39	NCT03CH-100AY	CHIP CAP.	10 pF 1600V H	
C8771-74	QFLC1HJ-333MZ	M CAP.	0.033 μF 50V J	
C8802	QEHC1HM-476MZ	E CAP.	47 μF 50V M	
C8804	QEHC1HM-476MZ	E CAP.	47 μF 50V M	
C8805	QEHC1VM-476MZ	E CAP.	47 μF 35V M	
C8806	NCS21HJ-221AY	CER.CAP.	220 pF 50V J	
C8812	QEHC1HM-476MZ	E CAP.	47 μF 50V M	
C8814	QEHC1HM-476MZ	E CAP.	47 μF 50V M	
C8815	QEHC1VM-476MZ	E CAP.	47 μF 35V M	
C8816	NCS21HJ-221AY	CER.CAP.	220 pF 50V J	
C8822	QEHC1HM-476MZ	E CAP.	47 μF 50V M	
C8824	QEHC1HM-476MZ	E CAP.	47 μF 50V M	
C8825	QEHC1VM-476MZ	E CAP.	47 μF 35V M	
C8826	NCS21HJ-221AY	CER.CAP.	220 pF 50V J	
C8901-02	QETC1VM-227Z	E CAP.	220 μF 35V M	
C8906-07	QETC1VM-227Z	E CAP.	220 μF 35V M	
C8916-27	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
COIL				
L8901-04	CELC048-470Z	CHOKE COIL		

⚠	Symbol No.	Part No.	Part Name	Description	Local
	DIODE				
	D8251-52	RD8.2E(B2)-T2	ZENER DIODE		
	D8256	DAN202K-X	CHIP DIODE		
	D8305	DAP202K-X	CHIP DIODE		
	D8307	DAN202K-X	CHIP DIODE		
	D8315	DAP202K-X	CHIP DIODE		
	D8802-05	RD33E(B1)-T2	ZENER DIODE		
	D8812-15	RD33E(B1)-T2	ZENER DIODE		
	D8822-25	RD33E(B1)-T2	ZENER DIODE		
	D8901-05	MA3150(M)-X	ZENER DIODE		
	TRANSISTOR				
	Q8101	2SC2412K(QR)-X	SI.TRANSISTOR		
	Q8102	2SA1037K(QR)-X	SI.TRANSISTOR		
	Q8103-05	DTC124EKA-X	DIGI.TRANSISTOR		
	Q8901	2SD1276A(QP)	SI.TRANSISTOR		
	Q8902	2SB950A(QP)	SI.TRANSISTOR		
	IC				
	IC8101	PA0036	I.C.(MONO-ANA)		
	IC8103-04	TC4538BP	I.C.(DIGI-MOS)		
	IC8201-02	BA15218N	I.C.(MONO-ANA)		
	IC8204-05	BA15218N	I.C.(MONO-ANA)		
	IC8253	MC14053BCP	I.C.(DIGI-MOS)		
	IC8301-03	BA15218N	I.C.(MONO-ANA)		
	IC8701-11	BA15218N	I.C.(MONO-ANA)		
	IC8801-03	STK4274	I.C.(HYBRID)		
	IC8901	M5230L	I.C.(MONO-ANA)		
	IC8902	NJM7812FA	I.C.(MONO-ANA)		
	IC8903	NJM7912FA	I.C.(MONO-ANA)		
	IC8904	NJM7805FA	I.C.(MONO-ANA)		
	IC8905	NJM7905FA	I.C.(MONO-ANA)		
	OTHERS				
⚠	R8806	QRH027J-3R3M	F R	3.3 Ω 2W J	
⚠	R8816	QRH027J-3R3M	F R	3.3 Ω 2W J	
⚠	R8826	QRH027J-3R3M	F R	3.3 Ω 2W J	
⚠	R8836	QRH027J-3R3M	F R	3.3 Ω 2W J	
⚠	R8846	QRH027J-3R3M	F R	3.3 Ω 2W J	
⚠	R8856	QRH027J-3R3M	F R	3.3 Ω 2W J	

FRONT CONTROL PW BOARD ASS'Y (SKB-8101A)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	DIODE				
	D8001	SLR-342DU-T	L.E.D.(ORG)		
	D8002	GL3ED8	L.E.D.		
	D8003	1SS133-T2	SI.DIODE		
	D8401-04	MTZJ10(A)-T2	ZENER DIODE		
	TRANSISTOR				
	Q8001	DTC124ESA-T	DIGI.TRANSISTOR		
	Q8002-03	DTA124ESA-T	DIGI.TRANSISTOR		
	Q8401	2SC3311A(QR)-T	SI.TRANSISTOR		
	OTHERS				
		CM35833-A01-H	L.E.D.HOLDER		
	J8001	QMCC004-C01	MINI DIN JACK		
	J8002	CEMN011-001	JACK		
	J8003	CEMN011-003	JACK		
	J8004	CEMN011-002	JACK		
	J8005	QMS3004-C01	HEADPHONE JACK		
	S8002	QSP1A11-C18Z	PUSH SWITCH	CH+	
	S8003	QSP1A11-C18Z	PUSH SWITCH	TV/VIDEO	
	S8004	QSP1A11-C18Z	PUSH SWITCH	CH-	
	S8005	QSP1A11-C18Z	PUSH SWITCH	VOL+	
	S8006	QSP1A11-C18Z	PUSH SWITCH	MENU	
	S8007	QSP1A11-C18Z	PUSH SWITCH	VOL-	
⚠	S8901	QSP4K21-C01	PUSH SWITCH	MAIN POWER SW	

PIP/TEXT PW BOARD ASS'Y (SKB-0T001A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
RESISTOR				
R0002	CEVP005-102XM	CH V R	1kΩ	
R0004	CEVP005-222XM	CH V R	2.2kΩ	
R0009	CEVP005-102XM	CH V R	1kΩ	
R0116	CEVP005-681XM	CH V R	680 Ω B Y LEVEL	
R0260	CEVP005-222XM	CH V R	2.2kΩ B R GAIN	
R0261	CEVP005-222XM	CH V R	2.2kΩ B B GAIN	
R0262	CEVP005-222XM	CH V R	2.2kΩ B G GAIN	
CAPACITOR				
C0001-02	NCT03CH-152AY	CHIP CAP.	1500 p F 1600V H	
C0003	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0004-05	NCT03CH-122AY	CHIP CAP.	1200 p F 1600V H	
C0006	NCT03CH-101AY	CHIP CAP.	100 p F 1600V H	
C0008	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0012	NCT03CH-101AY	CHIP CAP.	100 p F 1600V H	
C0014	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0015	NCT03CH-101AY	CHIP CAP.	100 p F 1600V H	
C0018	NCT03CH-122AY	CHIP CAP.	1200 p F 1600V H	
C0019	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0023-24	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0103	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0104	QEKC1HM-104GMZ	E CAP.	0.1 μ F 50V M	
C0105	NEE21CM-684RY	CHIP TAN E CAP.	0.68 μ F 16V M	
C0106	NCB21HK-332AY	CHIP CAP.	3300 p F 50V K	
C0107	NCB21HK-223AY	CHIP CAP.	0.022 μ F 50V K	
C0108	NCB21EK-104AY	CHIP CAP.	0.1 μ F 25V K	
C0109	NCB21HK-332AY	CHIP CAP.	3300 p F 50V K	
C0110-11	NCT03CH-7R0AY	CHIP CAP.	7 p F 1600V H	
C0112	NCB21EK-104AY	CHIP CAP.	0.1 μ F 25V K	
C0113	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0114-16	NCB21HK-223AY	CHIP CAP.	0.022 μ F 50V K	
C0118	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0121	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0122-23	NCB21HK-103AY	CHIP CAP.	0.01 μ F 50V K	
C0125	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0127	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0128-29	NCT03CH-221AY	CHIP CAP.	220 p F 1600V H	
C0133-35	NCF21HZ-103AY	CHIP C CAP.	0.01 μ F 50V Z	
C0136	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0137-38	QEN61CM-106Z	BP E CAP.	10 μ F 16V M	
C0139	QEN61HM-106Z	BP E CAP.	10 μ F 50V M	
C0142	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0144	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0145	NCF21HZ-103AY	CHIP C CAP.	0.01 μ F 50V Z	
C0146	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0148	NCF21HZ-103AY	CHIP C CAP.	0.01 μ F 50V Z	
C0149	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0151	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0154	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0155-56	NCT03CH-220AY	CHIP CAP.	22 p F 1600V H	
C0157	NCB21EK-104AY	CHIP CAP.	0.1 μ F 25V K	
C0158	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0162-63	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0165-66	NCF21HZ-103AY	CHIP C CAP.	0.01 μ F 50V Z	
C0172-73	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0174-75	NCT03CH-270AY	CHIP CAP.	27 p F 1600V H	
C0176	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0178	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0179-81	NCF21CZ-105AY	CER.CAP.	1 μ F 16V Z	
C0183	NCF21HZ-104AY	CER.CAP.	0.1 μ F 50V Z	
C0185-86	NCT03CH-7R0AY	CHIP CAP.	7 p F 1600V H	
C0189	NCT03CH-680AY	CHIP CAP.	68 p F 1600V H	
C0190	NCT03CH-471AY	CHIP CAP.	470 p F 1600V H	
C0191-93	NCF21HZ-103AY	CHIP C CAP.	0.01 μ F 50V Z	
C0201-02	NCT03CH-121AY	CHIP CAP.	120 p F 1600V H	

⚠ Symbol No.	Part No.	Part Name	Description	Local
CAPACITOR				
C0203-04	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
C0231	NCB21HK-102AY	CHIP CAP.	1000 pF 50V K	
C0302	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
C0304	NCT03CH-150AY	CHIP CAP.	15 pF 1600V H	
C0305	NCT03CH-8R0AY	CHIP CAP.	8 pF 1600V H	
C0306	NCT03CH-102AY	CHIP CAP.	1000 pF 1600V H	
C0307-09	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
C0312	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
C0314	NCB21HK-103AY	CHIP CAP.	0.01 μF 50V K	
C0316	NCS21HJ-561AY	CHIP C CAP.	560 pF 50V J	
C0318	QETC0JM-227Z	E CAP.	220 μF 6.3V M	
C0319	NCF21HZ-104AY	CER.CAP.	0.1 μF 50V Z	
C0320	NCF21HZ-103AY	CHIP C CAP.	0.01 μF 50V Z	
C0321-23	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
C0324-26	NCF21CZ-105AY	CER.CAP.	1 μF 16V Z	
C0329-35	NCF21HZ-103AY	CHIP C CAP.	0.01 μF 50V Z	
C0401-03	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
C0405-07	QEN61CM-106Z	BP E CAP.	10 μF 16V M	
C0408	NCT03CH-820AY	CHIP CAP.	82 pF 1600V H	
C0409	NCF21HZ-103AY	CHIP C CAP.	0.01 μF 50V Z	
TRANSFORMER				
T0101	CE42697-001	L P F		
T0102	CELT036-014	VCO COIL	WCK	
T0103	CE42497-001	OSC COIL	RCK1	
T0104	CE42498-001	OSC COIL	RCK3	
T0105	CE42498-001	OSC COIL	RCK2	
T0201	CE42412-001	LOWPASS FILTER		
COIL				
L0101	CELP026-100Z	PEAKING COIL	10 μH	
L0103-04	CELP026-100Z	PEAKING COIL	10 μH	
L0105-06	CE41132-221Y	CHIP INDUCTOR		
L0107-08	CELP026-100Z	PEAKING COIL	10 μH	
L0201-02	CE41132-121Y	CHIP INDUCTOR		
L0301	CE40344-4R7YL	INDUCTOR		
L0302	CE40344-3R3YL	INDUCTOR		
L0308	CE40344-4R7YL	INDUCTOR		
DIODE				
D0103-04	MA57-X	SI.DIODE		
D0301	MA151WK-X	DIODE		
D0401-04	1SS353-X	SI.DIODE		
TRANSISTOR				
Q0102-06	2SC2712(YG)-X	CHIP TRANSISTOR		
Q0107	2SA1162(YG)-X	CHIP TRANSISTOR		
Q0108	2SC2712(YG)-X	CHIP TRANSISTOR		
Q0110-12	2SC2712(YG)-X	CHIP TRANSISTOR		
Q0115-18	2SC2712(YG)-X	CHIP TRANSISTOR		
Q0201-02	2SA1162(YG)-X	CHIP TRANSISTOR		
Q0203-05	2SC2712(YG)-X	CHIP TRANSISTOR		
Q0206-07	2SA1162(YG)-X	CHIP TRANSISTOR		
Q0208-11	2SC2712(YG)-X	CHIP TRANSISTOR		
Q0212-13	2SA1162(YG)-X	CHIP TRANSISTOR		
Q0214-18	2SC2712(YG)-X	CHIP TRANSISTOR		
Q0219	DTC124EKA-X	DIGI.TRANSISTOR		
Q0301	2SC2412K(QR)-X	SI.TRANSISTOR		
Q0302	2SA1037K(QR)-X	SI.TRANSISTOR		
Q0303-05	2SC2412K(QR)-X	SI.TRANSISTOR		
Q0401-02	2SC2412K(QR)-X	SI.TRANSISTOR		
Q0403	2SA1037K(QR)-X	SI.TRANSISTOR		
Q0404	DTC124EKA-X	DIGI.TRANSISTOR		
I C				
IC0001-04	TC74HC221AF-X	I C		
IC0005	TC74HC153AF	I.C.(DIGI-MOS)		

⚠ Symbol No.	Part No.	Part Name	Description	Local
I C				
IC0100	TDA9141/N2	I.C.(MONO-ANA)		
IC0101	TC7W14F-X	I.C.(DIGI-MOS)		
IC0103	UPD6403AGF	I.C.(DIGI-MOS)		
IC0104	CAT51C262-80ZS	I.C.(MEMORY-OTH)		
IC0105	AN7805	I.C.(MONO-ANA)		
IC0106	TC7W14F-X	I.C.(DIGI-MOS)		
IC0301	SAA5281P/E/M3	I.C.(MONO-ANA)		
IC0304	AT24C02-10PC	I.C.(EP-ROM)		
IC0305	P83C654FBP/541	I.C.(MICRO-COMP)		
IC0401	AN5860	I.C.(MONO-ANA)		
OTHERS				
EF0101-13	CE41865-470Y	EMI FILTER		
EF0114-15	CE42285-103Y	EMI FILTER		
EF0116-18	CE41865-470Y	EMI FILTER		
X0101	CE40749-001	CRYSTAL		
X0102	CE40668-001	CRYSTAL		
X0301	CE42102-001	CRYSTAL		

REMO-CON PW BOARD ASS'Y (SKB-8102A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
CAPACITOR				
C8012	QFLC1HJ-104MZ	M CAP.	0.1μF 50V J	
I C				
IC8011	HC-337M	IFR DETECT UNIT		

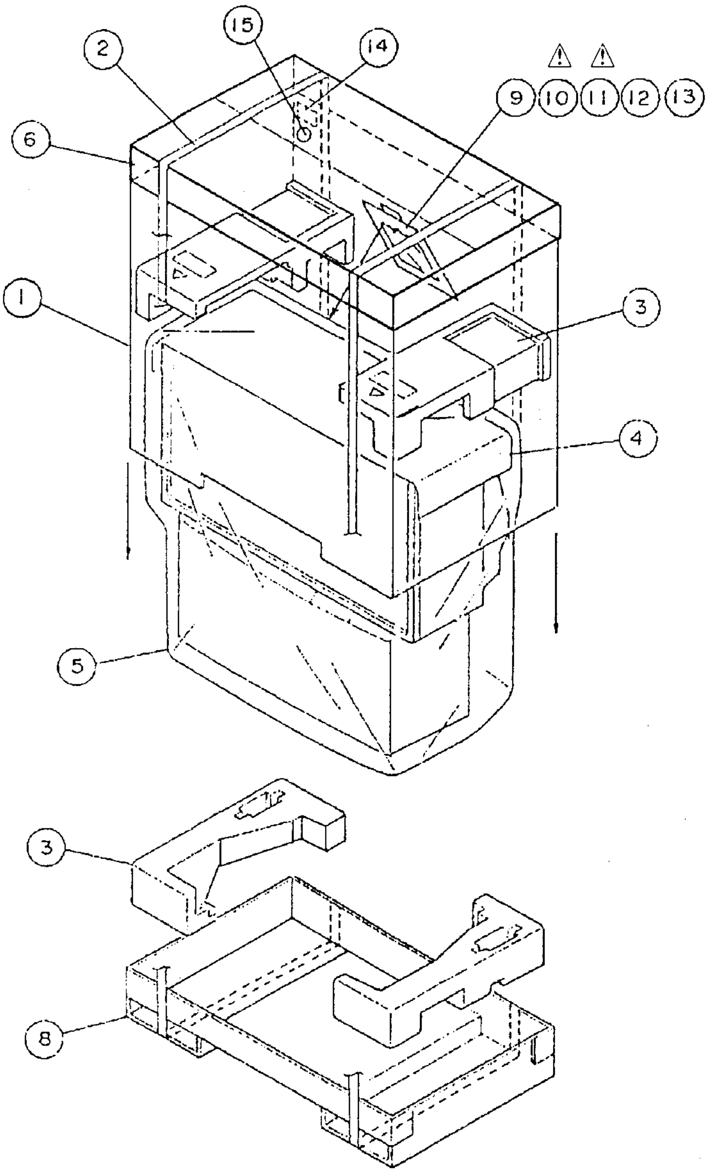
3D Y/C SEP.MODULE (SKB-0Y001A)

⚠ Symbol No.	Part No.	Part Name	Description	Local
OTHERS				
	SKB-0Y001A	3D Y/C SEP.MODULE		

POWER PW BOARD ASS'Y (SKB-9001A)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	RESISTOR				
	R9158	QRV141F-3091AY	MF R	3.09kΩ 1/4W F	
	R9169	QRD14CJ-153SX	C R	15kΩ 1/4W J	
	R9654	QRZ0056-103Z	COMP.R	10kΩ 1/2W K	
⚠	R9679	QRD121J-184SY	C R	180kΩ 1/2W J	
⚠	R9901	QRZ0107-685Z	C R	6.8MΩ	
⚠	R9902	QRZ0057-825	C R	8.2MΩ 1W J	
⚠	R9903	QRZ0057-825	C R	8.2MΩ 1W J	
	CAPACITOR				
	C9151	QFLC1HJ-333MZ	M CAP.	0.033μF 50V J	
	C9152	QEN61CM-106Z	BP E CAP.	10μF 16V M	
	C9402	QETC1VM-107Z	E CAP.	100μF 35V M	
	C9403	QETC1VM-477Z	E CAP.	470μF 35V M	
	C9601	QEN61HM-335Z	BP E CAP.	3.3μF 50V M	
	C9602	QETC1JM-106Z	E CAP.	10μF 63V M	
	C9603	QFV71HJ-104MZ	TF CAP.	0.1μF 50V J	
	C9607	QFV71HJ-104MZ	TF CAP.	0.1μF 50V J	
	C9609	QFV71HJ-224MZ	TF CAP.	0.22μF 50V J	
	C9612	QFZ0081-1002S	M P P CAP.	10pF 1600V ±3%	
	C9615	QFZ0081-1001S	M P P CAP.	10pF 1600V ±3%	
	C9616-17	QFV71HJ-124MZ	TF CAP.	0.12μF 50V J	
⚠	C9901	QFZ9036-224M	MF CAP.	0.22μF	
⚠	C9902	QFZ9036-224M	MF CAP.	0.22μF	
⚠	C9903	QCZ9033-222A	C CAP.	2200pF	
⚠	C9904	QCZ9033-222A	C CAP.	2200pF	
⚠	C9905	QCZ9033-472A	C CAP.	4700pF	
⚠	C9906	QFZ9036-104M	MF CAP.	0.1μF	
⚠	C9911	QFZ9036-104M	MF CAP.	0.1μF	
⚠	C9912	QFZ9036-104M	M.F.CAP.	0.1μF	
	DIODE				
	D9151-56	1SS133-T2	SI.DIODE		
	D9157	EU2A-T3	SI.DIODE		
	D9158	1SS133-T2	SI.DIODE		
	D9401	1SR35-100A-T2	SI.DIODE		
	D9603	1SS133-T2	SI.DIODE		
	D9605-06	1SS133-T2	SI.DIODE		
	D9607	ES1F-LFG2	SI.DIODE		
	D9608-09	1SS133-T2	SI.DIODE		
	D9610	ES1F-LFG2	SI.DIODE		
	TRANSISTOR				
	Q9151-54	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q9155-56	2SA1499(QPO)	SI.TRANSISTOR		
	Q9401-02	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q9601-03	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q9604	2SA933S(QR)-T	SI.TRANSISTOR		
	Q9605	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q9606-07	2SC4256	SI.TRANSISTOR		
	Q9608	2SA933S(QR)-T	SI.TRANSISTOR		
	Q9609	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q9610-11	2SC4256	SI.TRANSISTOR		
	Q9612	2SA933S(QR)-T	SI.TRANSISTOR		
	Q9613-14	2SC1740S(QR)-T	SI.TRANSISTOR		
	Q9615	2SA933S(QR)-T	SI.TRANSISTOR		
	Q9616-17	2SC1740S(QR)-T	SI.TRANSISTOR		
	IC				
	IC9151	UPC358C	I.C.(MONO-ANA)		
	IC9404	LA7845	I.C.(MONO-ANA)		
	OTHERS				
		CEMG002-001Z	FUSE CLIP		
⚠	F9901	QMF51E2-5R0S	FUSE	5A	
⚠	LF9901	CE41775-001	LINE FILTER		
⚠	LF9911	CE41775-001	LINE FILTER		
⚠	R9676	QRZ0054-101M	F R	100 Ω 1/4W J	
	R9677	QRZ0054-101M	F R	100 Ω 1/4W J	
	SG9601	CE42447-302	ARRESTOR		
⚠	VA9901	ERZ-C10VK621A	VARISTOR		

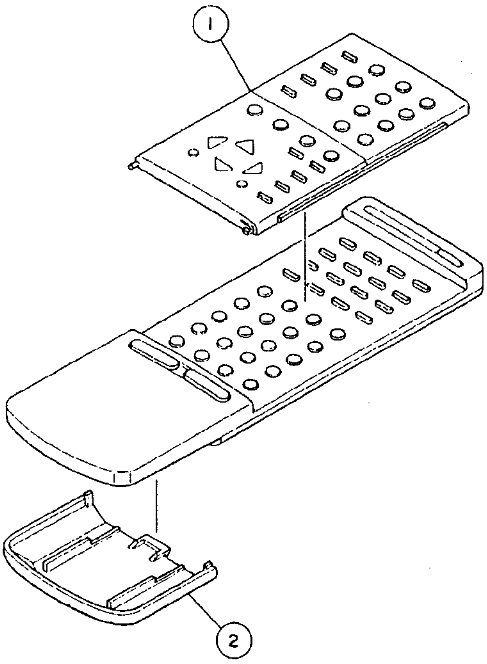
PACKING



PACKING PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
	1	CP11519-001	PACKING CASE		
	2	CP30371-00K	BAND	(×2)	
	3	CP11573-A0A	CUSHION ASSY		
	4	CP30611-008	TOP COVER		
	5	CP30612-006	POLY BAG		
	6	CP30952-001	TOP CASE		
	8	CP30928-001	BOTTOM CASE		
	9	QPGA025-03505	POLY BAG		
⚠	10	CQ40168-001	INST BOOK		
⚠	11	CQ40169-001	INST BOOK		
	12	RM-C995-2	REMOCON		
	13	**CEMK002-001**	**ADAPTOR PLUG**	**AV-61PRO-A**	
	14	**CP30976-008(R)**	**POS,SERIAL LABEL**	**AV-61PRO**	
	14	**CP30976-011(R)**	**POS,SERIAL LABEL**	**AV-61PRO-A**	
	14	**CP30976-009(R)**	**POS,SERIAL LABEL**	**AV-61PRO-SC**	
	14	**CP30976-010(R)**	**POS,SERIAL LABEL**	**AV-61PRO-HK**	
	15	**CM48098-001**	**SEAL**	**AV-61PRO-SC**	

REMOTE CONTROL UNIT (RM-C995-2)



REMOTE CONTROL UNIT PARTS LIST

⚠ Ref.No.	Part No.	Part Name	Description	Local
1	BCK2Y-017A	DOOR ASS'Y		
2	BCK110201B	BATTRY COVER		

JVC

SERVICE MANUAL

REAR PROJECTION TELEVISION

AV-61PRO(C)

BASIC CHASSIS
KB

Supplementary

The following items for the AV-61PRO(C) model were changed from those of the AV-61PRO(-SC) model. Therefore, this service manual describes only the items which differ from those of the AV-61PRO(-SC) service manual.
For details other than those described in this manual, please refer to the AV-61PRO(-SC) service manual (No.51125, July. 1996) and (No.51125B,Mar.1997).

DIFFERENCE PARTS LIST
BETWEEN AV-61PRO(-SC) AND AV-61PRO(C) MODELS
M2 EXPLODED VIEW PARTS LIST AND PACKING PARTS LIST

⚠	Ref No.	PARTS No.		PARTS NAME	DESCRIPTION
		AV-61PRO(-SC)	AV-61PRO(C)		
M2 EXPLODED VIEW PARTS LIST					
⚠	54	CM22522-027(R)	CM22522-032(R)	RATING LABEL	page 3,4
⚠	55	CM48097-002	————	CCIB MARK	page 3,4
PACKING PARTS LIST					
⚠	11	CQ40169-001	————	INST BOOK	page29
	14	CP30976-009(R)	CP30976-023(R)	POS,SERIAL LABEL	page3,29

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TELEVISION RECEIVER DIVISION 1106 Heta,Iwai-city,Ibaraki-prefecture,306-06,Japan

AV61PROCSCSK

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JVC **Manual Change Information**

SERVICE MANUAL

REAR PROJECTION TELEVISION

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AV-61PRO
AV-61PRO(-A)/(-HK)/(-SC)

Since some details of the AV-61PRO service manual (No.51125, July 1996) were incorrected and changed, we are informing you of these errors / changes and of the corrected descriptions / new descriptions.

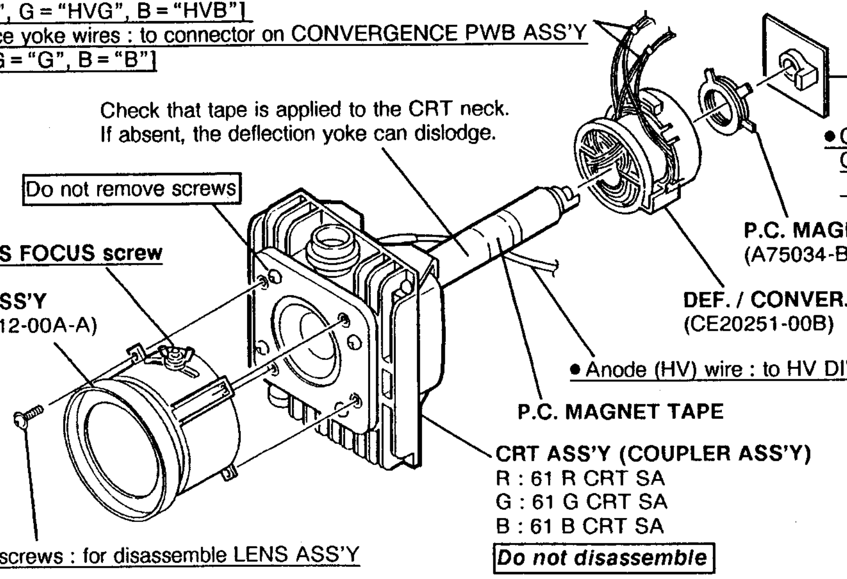
1. SPECIFIC SERVICE INSTRUCTIONS

■"2. PROJECTION UNIT REPLACEMENT" [Page 1-6]

The following description supplements "ADJUSTMENT DURING REPLACEMENT"

- When simultaneously replacing all three R, G and B projection units, use the following procedure.
  1. Replace the R and B projection units.
  2. With the G image as reference, adjust the R and B focus, screen, raster centering, etc.
  3. Replace the G projection unit.
  4. In the same manner as R and B, adjust the G unit focus, screen, raster centering, etc.
  5. Adjust the G unit convergence to overlap the G image on the R and B images.
  6. Adjust the R and B units convergence to overlap the R and B images on the G image.
  7. Adjust white balance highlight.

* *Refer to detailed description under "WHEN REPLACING SCREEN AND PROJECTION UNITS"on page 1-18.*



- Deflection yoke wires : to connector on DEF. PWB ASS'Y [R = "HVR", G = "HVG", B = "HVB"]
- Convergence yoke wires : to connector on CONVERGENCE PWB ASS'Y [R = "R", G = "G", B = "B"]

Check that tape is applied to the CRT neck. If absent, the deflection yoke can dislodge.

- CRT earth wire : to connector on CRT SOCKET PWB ASS'Y [R = "E3", G = "E1", B = "E2"]
- Anode (HV) wire : to HV DIVIDER

R CRT SOCKET PWB ASS'Y : SKB-3003A
G CRT SOCKET PWB ASS'Y : SKB-3001A
B CRT SOCKET PWB ASS'Y : SKB-3002A
Do not remove screws
LENS FOCUS screw
LENS ASS'Y (CM36412-00A-A)
P.C. MAGNET (4 POLE / 2 POLE) (A75034-B)
DEF. / CONVER. YOKE (CE20251-00B)
P.C. MAGNET TAPE
CRT ASS'Y (COUPLER ASS'Y)
R : 61 R CRT SA
G : 61 G CRT SA
B : 61 B CRT SA
Do not disassemble
4 screws : for disassemble LENS ASS'Y

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No.51125B
Mar. 1997

■"3. DISASSEMBLY PROCEDURE" [Page 1-7]

(1) EXTERNAL COMPONENTS (FRONT)

- *The parts indicated under line : correction*

[INCORRECT]

■ SCREEN ASS'Y

1. Remove 3 screws Ⓐ (at left and right of the screen bottom).
2. The SCREEN ASS'Y is secured by hooks. Raise slightly to disengage of the screen from the hooks.
3. Place the screen with face upwards on a flat stand.

※ Refer to "SCREEN HALNDLING CAUTIONS" on page 1-6 when remove the screen itself and the screen handling.

※ NOTE :

- Because of the large size, at least two persons are recommended for removal and reassembly.
- Use care not to scratch the screen during work.
- During assembly, be sure to engage the left and right tabs wiyh the cabinet mounting positions.
- When transporting the SCREEN ASS'Y, avoid grasping the top of the screen panel, instead grasp the left and right areas.

■ CONTROL PANEL

1. Take out the speaker grille by pulling it outward (pull the top edge to take out) .
2. Remove 4 screws Ⓑ.
3. Pull the CONTROL PANEL outward.

■ FRONT CONTROL PWB ASS'Y

1. Take out the speaker grille (pull the top edge to take out) .
2. Remove 2 screws Ⓒ (with washers) .
3. Pull the FRONT CONTROL PWB ASS'Y outward.

[CORRECT]

■ CONTROL PANEL

1. Take out the speaker grille by pulling it outward (pull the top edge to take out) .
2. Remove 4 screws Ⓑ.
3. Pull the CONTROL PANEL outward.

■ FRONT CONTROL PWB ASS'Y

1. Take out the CONTROL PANEL.
2. Remove 2 screws Ⓒ (with washers) .
3. Pull the FRONT CONTROL PWB ASS'Y outward.

■ SCREEN ASS'Y

1. Take out the CONTROL PANEL.
2. Remove 3 screws Ⓐ (at left and right of the screen bottom).
3. The SCREEN ASS'Y is secured by hooks. Raise slightly to disengage of the screen from the hooks.
4. Place the screen with face upwards on a flat stand.

※ Refer to "SCREEN HALNDLING CAUTIONS" on page 1-6 when remove the screen itself and the screen handling.

※ NOTE :

- Because of the large size, at least two persons are recommended for removal and reassembly.
- Use care not to scratch the screen during work.
- During assembly, be sure to engage the left and right tabs wiyh the cabinet mounting positions.
- When transporting the SCREEN ASS'Y, avoid grasping the top of the screen panel, instead grasp the left and right areas.

■"4. PICTURE MODE / THEATRE STATUS / SOUND MODE STANDARD VALUES SETTINGS" [Page 1-10]

- *Change of SOFT and THEATRE values*

[PREVIOUS]

■PICTURE MODE and THEATRE STATUS

No.	Setting item	SOFT	THEATRE
1	BRIGHT	+0	+0
2	CONT	-5	-10
3	COLOUR	+0	-3
4	SHARP	-3	-5
5	TINT	+0	+2
6	R DRIVE	——	+3
7	G DRIVE	——	+0
8	B DRIVE	——	-8

[NEW]

■PICTURE MODE and THEATRE STATUS

No.	Setting item	SOFT	THEATRE
1	BRIGHT	+0	+0
2	CONT	**-8**	-10
3	COLOUR	+0	**-1**
4	SHARP	**-2**	**-2**
5	TINT	+0	+2
6	R DRIVE	——	**+2**
7	G DRIVE	——	+0
8	B DRIVE	——	**-4**

2. SERVICE ADJUSTMENT

■"3. ADJUSTMENTS WITH REMOTE CONTROL UNIT" [Page 1-14]

- *The parts indicated under line : correction*

[INCORRECT]

Adjustment screen items	Contents (Adjustment items)	
4. DEF	1. V-SHIFT	9. H-CENT
	2. V-SLOPE	10. HVU
	3. V-SIZE	11. HVD
	4. V-S. CR	12. HCO
	5. TRAPEZ	13. R OFF
	6. EW-PIN	14. G OFF
	7. EW-COR	15. B OFF
	8. H-SIZE	

[CORRECT]

Adjustment screen items	Contents (Adjustment items)	
4. DEF	1. V-SHIFT	**9. TRAPEZ**
	2. V-SLOPE	10. HVU
	3. V-SIZE	11. HVD
	4. V-S. CR	12. HCO
	5. H-CENT	13. R OFF
	6. H-SIZE	14. G OFF
	7. EW-PIN	15. B OFF
	8. EW-COR	

■"4. STANDARD ADJUSTMENT VALUES (INITIAL SETTING VALUES)" [Page 1-16, 17]

- *Change of eacn mode values, and correct mistake*

● 1. IF [Page 1-16]

Item No.	Adjustment item	Variable range	Standard		Standard
3	DELAY POINT	0 - 63	10 Fixed	→	**10**
4	PIP DELAY POINT	0 - 63	10 Fixed	→	**10**

● 2. V/C [Page 1-16]

Item No.	Adjustment item	Variable range	Standard		Standard
1	CUTOFF	ON / OFF	OFF	→	**OFF Fixed**
2	R DRIVE	-16 - +15	-10	→	**-20**

Item No.	Adjustment item	Variable range	Standard		Standard
5	BRIGHT	-16 - +15	+0	→	**+6**
6	CONT	-16 - +15	+0	→	**+10**

Item No.	Adjustment item	Variable range	PAL	SECAM	NTSC3.58	NTSC4.43
7	COLOUR	-16 - +15	+3	+3	+3	+3

↓

PAL	SECAM	NTSC3.58	NTSC4.43
-6	**-6**	**+0**	**+0**

Item No.	Adjustment item			Adjustment item	
15	V. DIV	AUTO	→	**V. DIVIDER**	AUTO
		COMPULSION			COMPULSION

Item No.	Adjustment item		Adjustment item
16	BLUE CHECK	→	**BLUE BACK**

● 4. DEF [Page 1-17]

[INCORRECT / PREVIOUS]

Item No.	Adjustment item	Variable range	50Hz	60Hz
1	V-SHIFT	-32 - +31	+0 Fixed	+0 Fixed
2	V-SLOPE	-32 - +31	+0 Fixed	-2 Fixed
3	V-SIZE	-32 - +31	+0	-2
4	V-S. CR	-32 - +31	+0 Fixed	+0 Fixed
5	H-SCENT	-32 - +31	-4	+9
6	H-SIZE	-32 - +31	+6	+0
7	EW-PIN	-32 - +31	-6	+0
8	EW-COR	-32 - +31	-6	+0
9	TRAPEZ	-32 - +31	-9	-3

[CORRECT / NEW]

Item No.	Adjustment item	Variable range	50Hz	60Hz
1	V-SHIFT	-32 - +31	**-7** Fixed	+0 Fixed
2	V-SLOPE	-32 - +31	+0 Fixed	-2 Fixed
3	V-SIZE	-32 - +31	**-23**	**+3**
4	V-S. CR	-32 - +31	**-14** Fixed	+0 Fixed
5	TRAPEZ	-32 - +31	**+4**	-3
6	EW-PIN	-32 - +31	**-14**	+0
7	EW-COR	-32 - +31	-6	+0
8	H-SIZE	-32 - +31	+6	+0
9	**H-CENT**	-32 - +31	**+1**	+9

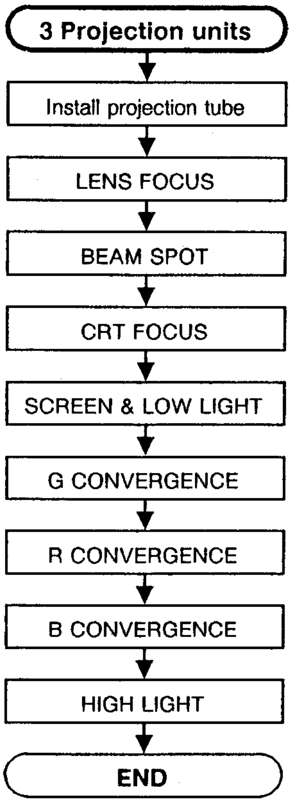
● 8. PIP [Page 1-17]

Item No.	Adjustment item	Variable range	Standard		Standard
5	PIP R-Y	00H - 3FH	20	→	1F
6	PIP B-Y	00H - 3FH	20	→	1F

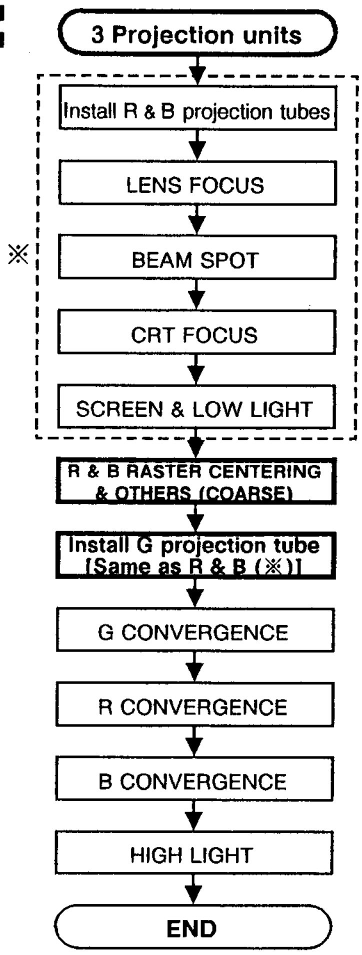
■"5. ADJUSTMENT FLOWCHARTS" [Page 1-18]

•"WHEN REPLACING SCREEN AND PROJECTION TUBES"

[INCORRECT]


3 Projection units
Install projection tube
LENS FOCUS
BEAM SPOT
CRT FOCUS
SCREEN & LOW LIGHT
G CONVERGENCE
R CONVERGENCE
B CONVERGENCE
HIGH LIGHT
END

[CORRECT]


3 Projection units
Install R & B projection tubes
LENS FOCUS
※
BEAM SPOT
CRT FOCUS
SCREEN & LOW LIGHT
R & B RASTER CENTERING & OTHERS (COARSE)
Install G projection tube [Same as R & B (※)]
G CONVERGENCE
R CONVERGENCE
B CONVERGENCE
HIGH LIGHT
END

■"6. ADJUSTMENT FLOWCHARTS" [Page 1-19 to 29]

•"3. NOISE (RF AGC)" [Page 1-19]

Item	Measuring instrument	Test point	Adjustment part	Description
[INCORRECT]		Screen	IF-3 : DELAY POINT IF-4 : PIP DEALY POINT	■PIP PICTURE 1. 2. Adjust <IF-3> to where noise disappears from the picture. 3.
[CORRECT]		Screen	IF-3 : DELAY POINT IF-4 : PIP DELAY POINT	■PIP PICTURE 1. 2. Adjust <IF-4> to where noise disappears from the picture. 3.

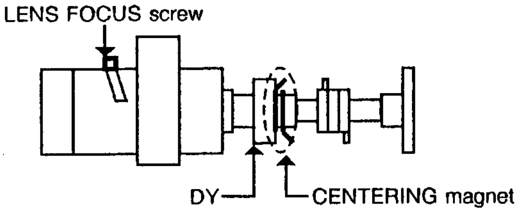
•"7. DEFLECTION & CONVERGENCE" [Page 1-22 to 25]

The most recent changes and corrections are contained on the following pages.

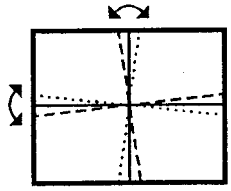
[CORRECT] [Page 1-21]

Item	Measuring instrument	Test point	Adjustment part	Description
7. DEFLECTION & CONVERGENCE				
7-1 DEFLECTION & CONVERGENCE Preadjustment ◆CONVER◆ < 4. DEF >	Pattern generator	Screen	G DY (def. yoke) R DY (def. yoke) B DY (def. yoke) [Projection unit] DEF-13 : R OFF DEF-15 : B OFF R SCREEN VR B SCREEN VR [FOCUS PACK] DEF-9 : H-CENT DEF-8 : H-SIZE	• Confirm standard adjustment value settings for "4. DEF". • Confirm correct FOCUS adjustment. • Supply a PAL crosshatch signal input. ■ **SCREEN ROTATION (DEFLECTION YOKE TILT)** 1. Check that the G-DY is secured it at the topmost part of the CRT neck. 2. Adjust the G-DY tilt so that the vertical and horizontal lines are respectively vertical and horizontal. Also adjust for optimum focus at the screen center. 3. After adjusting. firmly tighten the G-DY screw at the adjusted position. 4. In the same manner, adjust the tilt of the R and B deflection yokes. 5. After adjusting G, R and B, check for optimum focus at the center of the screen. If adjustment is deviated, repeat the above procedure from step 4 onward. ■**H. POSITION (CENTER) & SIZE [coarse]** 6. Set <DEF-13> and <DEF-15> to produce a green single colour. * Or reduce the R and B SCREEN VRs to produce a green single colour. 7. Reduce the horizontal width with <DEF-8> to where both left and right edges of the image are missing. 8. Adjust <DEF-9> to align the horizontal center of the image with the horizontal center of the screen. 9. Adjust <DEF-8> to set the horizontal size to 92.5%. 10. After adjusting, press the [MENU] key to store the adjustmnt values.

[Projection unit]

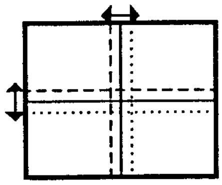


<SCREEN ROTATION>



Remove H and V tilt.

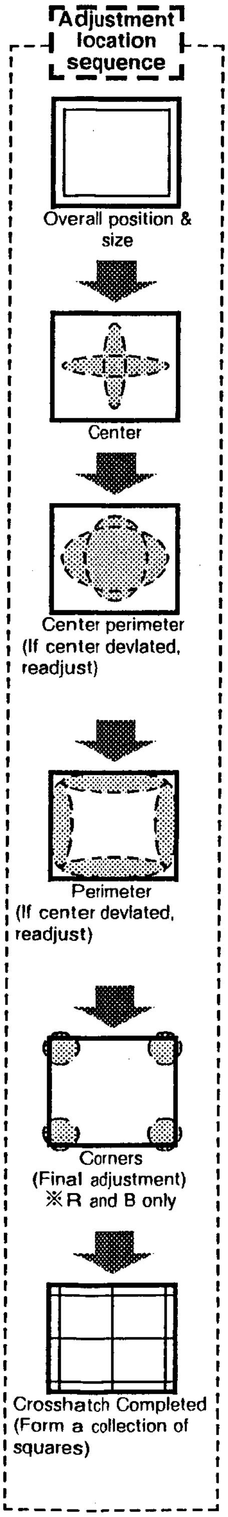
<H. POSITION>



With G as reference, overlap G, R and B lines at center.

Screen	"4. DEF" ON	SCREEN VR
G	13 + 15	R + B

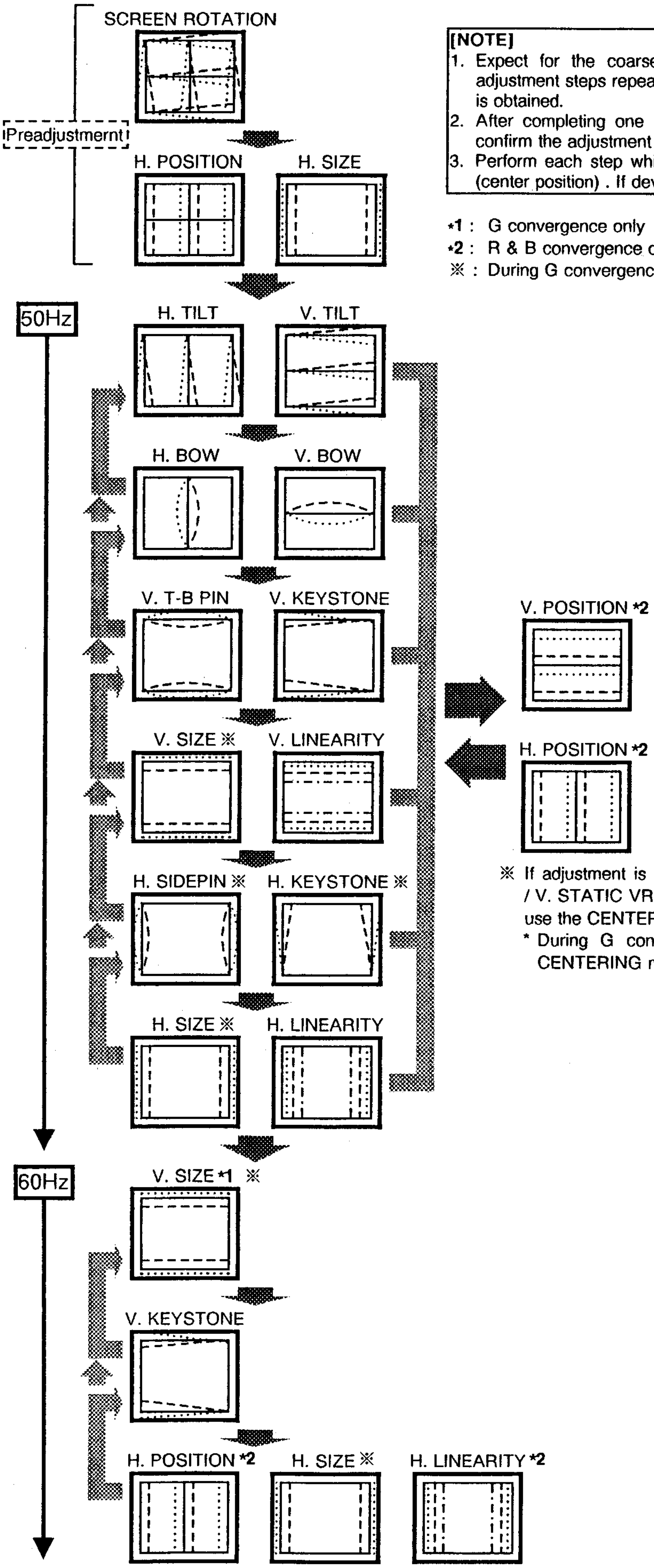
■ DEFLECTION & CONVERGENCE ADJUSTMENT PROCEDURE ■


Adjustment location sequence
Overall position & size
Center
Center perimeter (If center deviated, readjust)
Perimeter (If center deviated, readjust)
Corners (Final adjustment) ※R and B only
Crosshatch Completed (Form a collection of squares)

[NOTE]

1. Expect for the coarse adjustments, perform the adjustment steps repeatedly until precise adjustment is obtained.
2. After completing one adjustment step, be sure to confirm the adjustment of the previous step.
3. Perform each step while checking the H (V) static (center position) . If deviated, correct as required.

*1 : G convergence only
*2 : R & B convergence only
※ : During G convergence, adjust with "4. DEF"


SCREEN ROTATION
Preadjustmernt
H. POSITION
H. SIZE
50Hz
H. TILT
V. TILT
H. BOW
V. BOW
V. T-B PIN
V. KEYSTONE
V. SIZE ※
V. LINEARITY
H. SIDEPIN ※
H. KEYSTONE ※
H. SIZE ※
H. LINEARITY
V. POSITION *2
H. POSITION *2
60Hz
V. SIZE *1 ※
V. KEYSTONE
H. POSITION *2
H. SIZE ※
H. LINEARITY *2

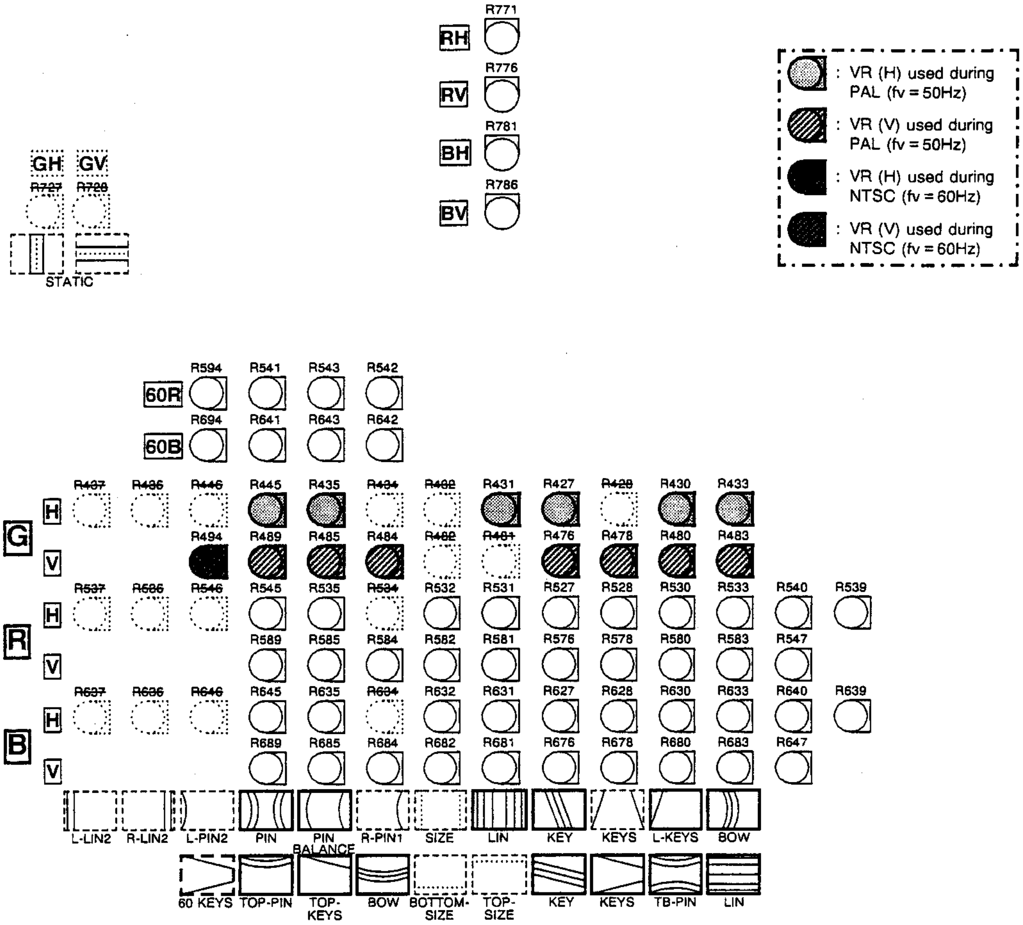
※ If adjustment is difficult, return H. STATIC / V. STATIC VRs to mechanical center and use the CENTERING magnet.
* During G convergence, adjust with G CENTERING magnet.

[CORRECT] [Page 1-25]

■G CONVERGENCE ADJUSTMENT VR LOCATION

■G CONVERGENCE
basic ajdustment procedure

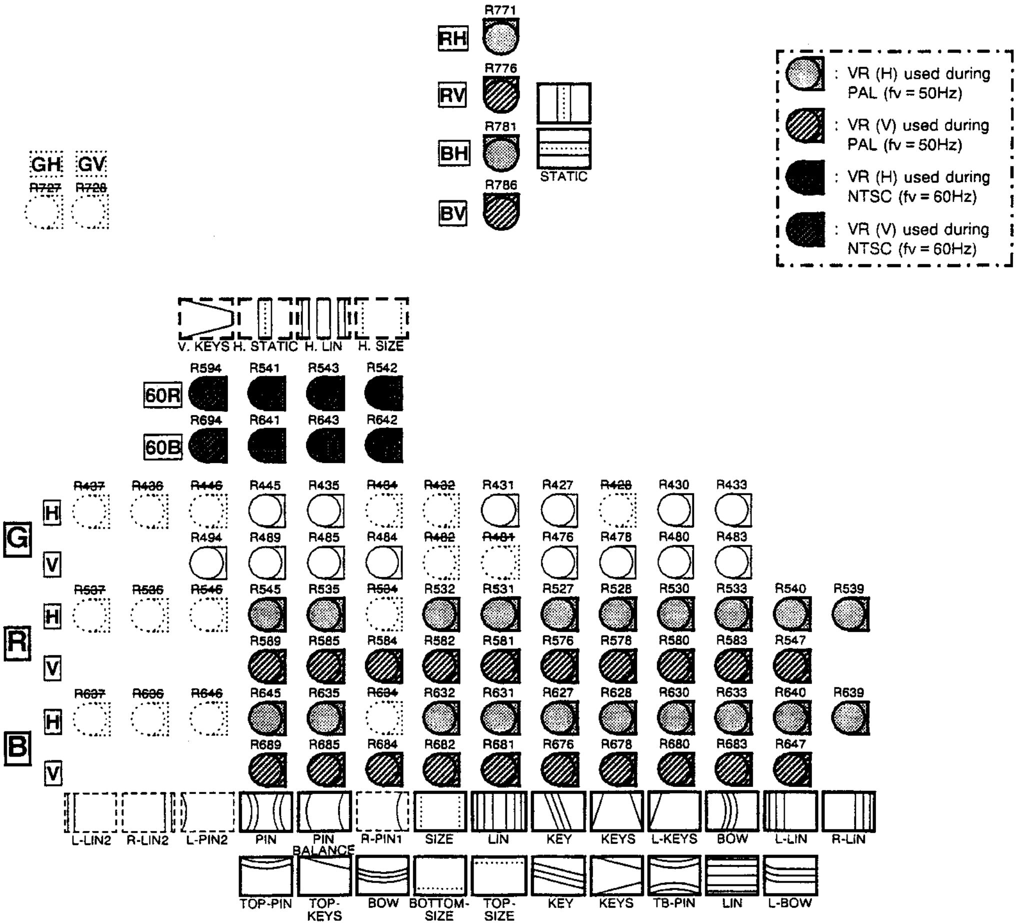
		VR symbol
①	1	R427
	2	R476
②	1	R433
	2	R484
③	1	R480 + R489
	2	R478 + R485
④		DEF-3 + R483 + G-CM
⑤	1	R445 + R435 + DEF-6 + DEF-7
	2	DEF-5 + R430
⑥		DEF-8 + R431 + G-CM
①		DEF-3
②		R494
③		DEF-9 + DEF-8


RH R771
RV R776
BH R781
BV R786
GH GV
~~R727~~ ~~R728~~
STATIC
: VR (H) used during PAL (fv = 50Hz)
: VR (V) used during PAL (fv = 50Hz)
: VR (H) used during NTSC (fv = 60Hz)
: VR (V) used during NTSC (fv = 60Hz)
60R R594 R541 R543 R542
60B R694 R641 R643 R642
G
H ~~R437~~ ~~R436~~ ~~R446~~ R445 R435 ~~R434~~ ~~R432~~ R431 R427 ~~R428~~ R430 R433
V R494 R489 R485 R484 ~~R482~~ ~~R481~~ R476 R478 R480 R483
R
H ~~R537~~ ~~R536~~ ~~R546~~ R545 R535 ~~R534~~ R532 R531 R527 R528 R530 R533 R540 R539
V R589 R585 R584 R582 R581 R576 R578 R580 R583 R547
B
H ~~R637~~ ~~R636~~ ~~R646~~ R645 R635 ~~R634~~ R632 R631 R627 R628 R630 R633 R640 R639
V R689 R685 R684 R682 R681 R676 R678 R680 R683 R647
L-LIN2 R-LIN2 L-PIN2 PIN PIN BALANCE R-PIN1 SIZE LIN KEY KEYS L-KEYS BOW
60 KEYS TOP-PIN TOP-KEYS BOW BOTTOM-SIZE TOP-SIZE KEY KEYS TB-PIN LIN

■R & B CONVERGENCE ADJUSTMENT VR LOCATION

■R & B CONVERGENCE
basic ajdustment procedure

		VR symbol	
		R	B
①		R-CM	B-CM
②	1	R527	R627
	2	R576	R676
③	1	R533	R633
	2	R584 + R547	R684 + R647
④	1	R580 + R589	R680 + R689
	2	R578 + R585	R678 + R685
⑤	1	R581 + R582	R681 + R682
	2	R583	R683
⑥	1	R545 + R535	R645 + R635
	2	R528 + R530	R628 + R630
⑦	1	R532	R632
	2	R531 + R540 + R539	R631 + R640 + R639
①		R594	R694
②		R543 + R541 + R542	R643 + R641 + R642


RH R771
RV R776
BH R781
BV R786
STATIC
GH GV
~~R727~~ ~~R728~~
: VR (H) used during PAL (fv = 50Hz)
: VR (V) used during PAL (fv = 50Hz)
: VR (H) used during NTSC (fv = 60Hz)
: VR (V) used during NTSC (fv = 60Hz)
V. KEYS H. STATIC H. LIN H. SIZE
60R R594 R541 R543 R542
60B R694 R641 R643 R642
G
H ~~R437~~ ~~R436~~ ~~R446~~ R445 R435 ~~R434~~ ~~R432~~ R431 R427 ~~R428~~ R430 R433
V R494 R489 R485 R484 ~~R482~~ ~~R481~~ R476 R478 R480 R483
R
H ~~R537~~ ~~R536~~ ~~R546~~ R545 R535 ~~R534~~ R532 R531 R527 R528 R530 R533 R540 R539
V R589 R585 R584 R582 R581 R576 R578 R580 R583 R547
B
H ~~R637~~ ~~R636~~ ~~R646~~ R645 R635 ~~R634~~ R632 R631 R627 R628 R630 R633 R640 R639
V R689 R685 R684 R682 R681 R676 R678 R680 R683 R647
L-LIN2 R-LIN2 L-PIN2 PIN PIN BALANCE R-PIN1 SIZE LIN KEY KEYS L-KEYS BOW L-LIN R-LIN
TOP-PIN TOP-KEYS BOW BOTTOM-SIZE TOP-SIZE KEY KEYS TB-PIN LIN L-BOW

[Page 1-23] [CORRECT]

Item	Measuring instrument	Test point	Adjustment part	Description
7-2 G CONVERGENCE ◆CONVER◆ <4. DEF>	Pattern generator	Screen	DEF-3 : V-SIZE DEF-6 : EW-PIN DEF-7 : EW-COR DEF-5 : TRAPEZ DEF-8 : H-SIZE DEF-9 : H-CENT G CENTERING magnet [G-DY attatchment] ※ Others : Refer to figure (page 1-25)	● Prepare crosshatch signals for both PAL and NTSC. ● Set <DEF-13> and <DEF-15> to ON to produce a green single colour. * Or reduce the R and B SCREEN VRs to produce a green single colour. **■PAL / SECAM (fv=50Hz)** ● Supply a PAL crosshatch signal input. **① H. & V. TILT** 1. Adjust the H. KEY VR so that the vertical lines (straight lines) at the center of the screen are vertical. 2. Adjust the V. KEY VR so that the horizontal lines (straight lines) at the screen center are horizontal. **② H. & V. BOW DISTORTION** 1. Adjust the H. BOW VR to straighten the vertical lines at the center of the screen. 2. Adjust the V. BOW VR to straighten the horizontal lines at the center of the screen. **③ V. T-B PINCUSHION & KEYSTONE DISTORTION** 1. Adjust the V. TB-PIN VR to straighten the horizontal lines at both the top and bottom edges of the screen. 2. Adjust the V. KEYS VR and V. TOP-KEYS VR so that the horizontal lines (straight lines) at the top and bottom edges of the screen are horizontal. **④ V. SIZE & LINEARITY** Respectively adjust <DEF-3>, V. LIN VR and G CENTERING magnet to set the vertical hight (size) to 92.5%. When adjusting the G CENTERING magnet, use care not to disturb the horizontal position of the overall screen. **⑤ H. SIDE PINCUSHION & KEYSTONE DISTORTION** 1. Adjust the H. PIN VR, H. PIN BALANCE VR, <DEF-6> and <DEF-7> so that the vertical lines of the overall screen are straight. In this case, provided the vertical lines are straight, they may be inclined. 2. Adjust the <DEF-5> so that vertical lines at the right side of the screen are vertical. * Although the left side will also change, this is adjusted with reference to the right side. 3. Adjust the H. L-KEYS VR so that vertical lines at the left side of the screen are vertical. **⑥ H. SIZE & LINEARITY** Respectively adjust <DEF-8>, H. LIN VR and G CENTERING magnet to set the horizontal hight (size) to 92.5%. When adjusting the G CENTERING magnet, use care not to disturb the vertical position of the overall screen. **■NTSC (fv=60Hz)** ● Supply a NTSC crosshatch signal input. **① V. SIZE** Adjust <DEF-3> to set the vertical hight (size) to 92.5%. **② V. KEYSTONE DISTORTION** Adjust the V. 60 KEYS VR so thst horizontal (straight) lines at the top and bottom of the screen are horizontal. **③ H. SIZE** Respectively adjust <DEF-9> and <DEF-8> to set the horizontal width (size) to 92.5%.

■G convergence display colour switching item

Adjustment item	"4. DEF" ON	SCREEN VR
G convergence	13+15	R+B

■G convergence using VR table

Adjustment parts	Symbol	Adjustment items
H. KEY	R427	H. tilt
H. BOW	R433	H. bow distortion
H. PIN	R445	H. side pin
H. PIN BALANCE	R435	H. pin balance
H. L-KEYS	R430	H. keystone distortion
H. LIN	R431	H. linearity
V. KEY	R476	V. tilt
V. BOW	R484	V. bow distortion
V. TB-PIN	R480	V. top-bottom pin
V. TOP-PIN	R489	V. top pin
V. KEYS	R478	V. keystone distortion
V. TOP-KEY	R485	V. top tilt
V. LIN	R483	V. linearity
V. 60 KEYS	R494	V. keystone distortion

[CORRECT] **[Page 1-24]**

Item	Measuring instrument	Test point	Adjustment part	Description
7-3 **R CONVERGENCE** **◆CONVER◆** **7-4** **B CONVERGENCE** **◆CONVER◆**	**Pattern generator**	**Screen**	**R CENTERING magnet [R-DY attachment]** **B CENTERING magnet [B-DY attachment]** **※ Others : Refer to figure (page 1-25)**	● Set <DEF-15> [<DEF-13>] to ON to cutoff only the blue [red]. * Or reduce the B [R] SCREEN VR to cutoff only the blue [red]. **■PAL / SECAM (fv=50Hz)** ● Supply a PAL crosshatch signal input. **① H. & V. POSITION (RASTER CENTERING)** Adjust the R [B] CENTERING magnet to overlap the center (vertical and horizontal lines) of the red [blue] image with the green or cyan [yellow] image. **② H. & V. TILT** 1. H. KEY VR : Vertical lines at screen center are vertical. 2. V. KEY VR : Horizontal lines at screen center are horizontal. **③ H. & V. BOW DISTORTION** 1. H. BOW VR : Vertical lines at screen center are straight. 2. V. BOW VR, V. L-BOW VR : Horizontal lines at screen center are straight. * V. L-BOW VR : Left side only **④ V. T-B PINCUSHION & KEYSTONE DISTORTION** 1. V. T-B PIN VR : Horizontal lines at screen bottom are straight. Although top lines also change, adjust bottom as reference. 2. V. TOP-PIN VR : Horizontal lines at screen top are straight. 3. V. KEYS VR : Horizontal lines at screen bottom are horizontal. Although top lines also change, adjust bottom as reference. 4. V. TOP-KEYS VR : Horizontal lines at screen top are horizontal. **⑤ V. SIZE & LINEARITY** 1. V. TOP-SIZE VR, V. BOTTOM-SIZE VR : Horizontal lines overlap green at screen top and bottom. 2. V. LIN VR : Uniform vertical space between horizontal lines. **⑥ H. SIDE PINCUSHION & KEYSTONE distortion** 1. H. PIN VR, H. PIN BALANCE VR : Vertical lines at both left and right sides of screen are straight. 2. H. KEYS VR : Vertical lines at right side of screen are vertical. Although left side also varies, adjust the right side as reference. 3. H. L-KEYS VR : Vertizal lines at left side of screen are vertical. **⑦ H. SIZE & LINEARITY** 1. H. SIZE VR : Overlap screen vertical lines on green vertical lines. 2. H. LIN VR : Uniform horizontal space between vertical lines near screen center. 3. H. L-LIN VR, H. R-LIN VR : Uniform horizontal space between vertical lines at screen side. * H. L-LIN VR : Left side, H. R-LIN VR : Right side **■NTSC (fv=60Hz)** ● Supply a NTSC crosshatch signal input. **① V. KEYSTONE DISTORTION** Adjust V. 60 KEYS VR to overlap horizontal (straight) lines at both top and bottom screen with horizontal green lines. **② H. POSITION, SIZE & LINEARITY** Adjust H. 60 STATIC VR, H. 60 SIZE VR and H. 60 LIN VR to overlap vertical (straight) screen lines on green vertical lines.

※ Adjustment is the same for R and B, except for the adjusted parts.
* "Description" in brackets [ ] refers to B convergence.

※ All adjustments are to overlap the red and blue images on the green image (lines) .
R : Overlap on G or cyan image (lines)
B : Overlap on G or yellow image (lines)

- Basecally, adjustment is the same as G convergence. However, compared with G convergence, additional VRs are used. The table indicates the additional VRs for R and B only.

Expect for G convergence, do not disturb the adjustment items of the SERVICE MENU "4. DEF".

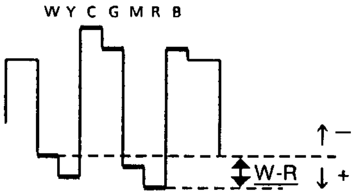
■R & B convergence display colour switching item

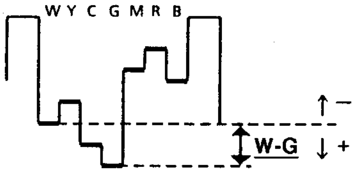
Adjustment item	"4. DEF" ON	SCREEN VR
R convergence	15	B
B convergence	13	R

■Added VRs only for R & B convergence

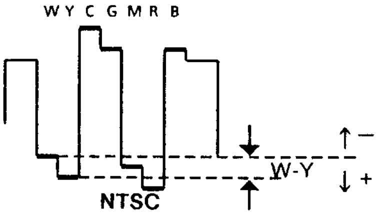
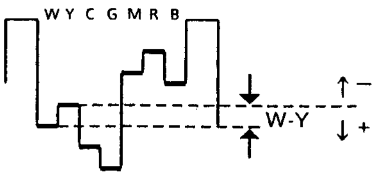
Adjustment parts	Symbol		Adjustment items
	R	B	
H. KEYS VR	R528	R628	H. keystone distortion
H. SIZE VR	R532	R632	H. size
H. L-LIN VR	R540	R640	H. linearity
H. R-LIN VR	R539	R639	H. linearity
H. STATIC VR	R771	R781	H. position
H. 60 STATIC VR	R541	R641	H. position
H. 60 SIZE VR	R542	R642	H. size
H. 60 LIN VR	R543	R643	H. linearity
V. L-BOW VR	R547	R647	V. bow distortion
V. TOP-KEYS VR	R585	R685	V. keystone distortion
V. TOP-SIZE VR	R581	R681	V. size
V. BOTTOM-SIZE VR	R582	R682	V. size
V. STATIC VR	R776	R786	V. position

•"12. PAL / SECAM / NTSC SUB COLOUR" & "13. NTSC SUB TINT" [Page 1-27]

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>12.
PAL/SECAM/NTSC
SUB COLOUR
◆R CRT SOCKET◆
[PREVIOUS]</td><td colspan="3">
<table><tr><td></td><td>Screen
TP-R</td><td>V/C-7 : COLOUR</td></tr></table>
<table><tr><th>Signal</th><th>PAL</th><th>SECAM</th><th>NTSC</th></tr><tr><td>W - R</td><td>+9V</td><td>+13V</td><td>+23V</td></tr></table>


PAL / SECAM / NTSC</td><td>■ Adjustment using oscilloscope
1. Supply a PAL colour bar signal.
2. Connect the oscilloscope to TP-R.
3. Adjust <V/C-7> to set the difference between white and red components of the colour bar signal to the value indicated the table (+9V) .
4. Press the [MENU] key to store the adjustment value.
5. In the same manner, adjust for SECAM and NTSC 3.58 signals.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.</td></tr>
<tr><td>12.
PAL/SECAM/NTSC
SUB COLOUR
◆G CRT SOCKET◆
[NEW]</td><td colspan="3">
<table><tr><td></td><td>Screen
TP-G</td><td>V/C-7 : COLOUR</td></tr></table>
<table><tr><th>Signal</th><th>PAL</th><th>SECAM</th><th>NTSC</th></tr><tr><td>W - G</td><td>+8V</td><td>+2V</td><td>+5V</td></tr></table>


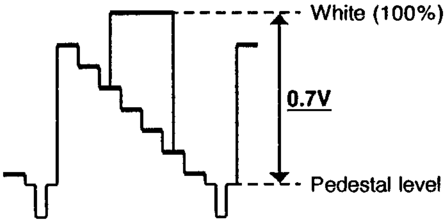
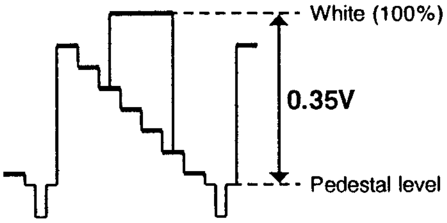
PAL / SECAM / NTSC</td><td>■ Adjustment using oscilloscope
1. Supply a PAL colour bar signal.
2. Connect the oscilloscope to TP-G.
3. Adjust <V/C-7> to set the difference between white and green components of the colour bar signal to the value indicated the table (+8V) .
4. Press the [MENU] key to store the adjustment value.
5. In the same manner, adjust for SECAM and NTSC 3.58 signals.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.</td></tr>
</table>

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>13.
NTSC
SUB TINT
◆R CRT SOCKET◆
[PREVIOUS]</td><td colspan="3">
<table><tr><td></td><td>Screen
TP-R</td><td>V/C-8 : TINT</td></tr></table>
<table><tr><th>Signal</th><th>NTSC</th></tr><tr><td>W - Y</td><td>+3V</td></tr></table>

</td><td>■ Adjustment using oscilloscope
1. Supply a NTSC colour bar signal.
2. Connect the oscilloscope to TP-R.
3. Adjust <V/C-8> to set the difference between white and yellow components of the colour bar signal to the value indicated the table (+3V) .
4. Press the [MENU] key to store the adjustment value.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.</td></tr>
<tr><td>13.
NTSC
SUB TINT
◆G CRT SOCKET◆
[NEW]</td><td colspan="3">
<table><tr><td></td><td>Screen
TP-G</td><td>V/C-8 : TINT</td></tr></table>
<table><tr><th>Signal</th><th>NTSC</th></tr><tr><td>W - Y</td><td>-2V</td></tr></table>


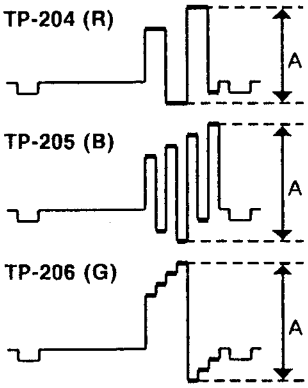
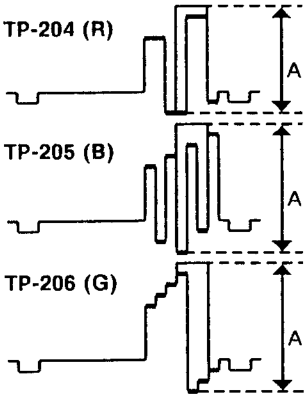
NTSC</td><td>■ Adjustment using oscilloscope
1. Supply a NTSC colour bar signal.
2. Connect the oscilloscope to TP-G.
3. Adjust <V/C-8> to set the difference between white and yellow components of the colour bar signal to the value indicated the table (-2V) .
4. Press the [MENU] key to store the adjustment value.
* By adjustment for NTSC3.58, the same values are auto matically set for NTSC4.43.</td></tr>
</table>

• *The parts indicated under line : correction*

•"14. PIP Y LEVEL" [Page 1-28]

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>[PRECIOUS]</td><td colspan="3"> </td><td>1.
2.
3. Adjust the PIP Y LEVEL VR to to sst the level difference between pedestal abd white (100%) to 0.7V.</td></tr>
<tr><td>[NEW]</td><td colspan="3"> </td><td>1.
2.
3. Adjust the PIP Y LEVEL VR to to sst the level difference between pedestal abd white (100%) to **0.35V**.</td></tr>
</table>

•"17. PIP RGB GAIN" [Page 1-28]

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>[PREVIOUS]</td><td colspan="3"> <table><tr><th>TP</th><th>A</th></tr><tr><td>TP-204 (R)</td><td>0.6Vp-p</td></tr><tr><td>TP-205 (B)</td><td>0.6Vp-p</td></tr><tr><td>TP-206 (G)</td><td>0.8Vp-p</td></tr></table></td><td>1. Recieve a PAL colour bar signal on both MAIN and PIP screens.
2. Set to PIP mode and display the PIP screen.
3. Connect the oscilloscope to TP-204.
4. Adjust PIP R GAIN VR to gain A indicated in the figure to 0.6Vp-p.
5. Connect the oscilloscope to TP-205.
6. Adjust PIP B GAIN VR to gain A indicated in the figure to 0.6Vp-p.
7. Connect the oscilloscope to TP-206.
8. Adjust PIP G GAIN VR to gain A indicated in the figure to 0.8Vp-p.</td></tr>
<tr><td>[NEW]</td><td colspan="3"> <table><tr><th>TP</th><th>A</th></tr><tr><td>TP-204 (R)</td><td>0.31Vp-p</td></tr><tr><td>TP-205 (B)</td><td>0.31Vp-p</td></tr><tr><td>TP-206 (G)</td><td>0.31Vp-p</td></tr></table></td><td>1. **Recieve a PAL split colour bar signal (include white 100%) on both MAIN and PIP screens.**
2. Set to PIP mode and display the PIP screen.
3. Connect the oscilloscope to TP-204.
4. Adjust PIP R GAIN VR to gain A indicated in the figure to **0.31Vp-p**.
5. Connect the oscilloscope to TP-205.
6. Adjust PIP B GAIN VR to gain A indicated in the figure to **0.31Vp-p**.
7. Connect the oscilloscope to TP-206.
8. Adjust PIP G GAIN VR to gain A indicated in the figure to **0.31Vp-p**.</td></tr>
</table>

•"19. PIP WHITE BALANCE" [Page 1-29]

[PREVIOUS]

Description
3. * Typical adjustment = within 20H ± 2H range

[NEW]

Description
3. * Typical adjustment = within **1FH** ± 2H range

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AV-61PRO
AV-61PRO-A
AV-61PRO-HK
AV-61PRO-SC

Printed in Japan
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A.N